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AMERICAN ALPINE JOURNAL

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VOLUME III 1938 NUMBER 2

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THE
AMERICAN ALPINE JOURNAL

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The Ascent of Mount Lucania

BRADFORD WASHBURN

EVER since the conquest of Mt. Logan in 1925, the ascent of Mt. Lucania has loomed as one of the most difficult and involved mountaineering problems in North America. Rising to an altitude of 17,150 ft. in the extreme S.W. corner of the Yukon Territory, a few miles E. of the Alaskan border, Lucania enjoyed at the same time the reputation of being the highest unclimbed peak as well as one of the most isolated mountain summits on the continent.

First seen and named by the Duke of the Abruzzi from the summit of Mt. Saint Elias on July 31st, 1897, Mt. Lucania was never approached closely until nearly forty years later. In the Spring of 1935, working for the National Geographic Society, Pilot Robert Randall and I made a photographic flight from our base camp on the Lowell Glacier to reconnoitre the southern and eastern approaches to the Lucania massif. In July and August of the same year, the fine Wood Yukon Expedition succeeded in climbing Mt. Steele (16,600 ft.) a peak which rises less than 10 miles to the E. of the summit of Lucania. In March, 1936, Russell Dow, on another photographic flight for the National Geographic Society, further added to our knowledge of the southern approaches to Lucania by taking a beautiful series of detailed aerial pictures of the valley system at the head of Walsh Glacier.

Working with the facts gleaned from these various reconnaissances, both from the air and on the ground, Robert Bates and I planned a serious attempt to climb Lucania in the summer of 1937. The isolation of the peak made it financially impossible for us to contemplate approaching it by packtrain either from

DESCENDING MT. STEELE AFTER TRAVERSE OF MT. LUCANIA
Photo, B. Washburn

McCarthy on the W. or Burwash Landing to the E. The approach to Mt. Logan was considered one of the most difficult parts of that expedition, and to tackle Lucania from the W. meant a complete duplication of the Logan approach up the Chitina Valley and Logan Glacier, with a 30-mile ascent of the Walsh Glacier heaped on for good measure. The only possible access to Lucania from the E. was directly over the summit of Mt. Steele, in itself a very long and arduous march from Burwash Landing in Canada.

The Yukon Expedition had taught us the value of the airplane in solving just this sort of problem. Several of our pictures showed us that there was an excellent landing-place near the head of Walsh Glacier. There we decided to land our party and supplies for the climb. We hoped to be picked up and flown out to civilization in August, after our trip was over. We felt it of great importance, however, to take every possible precaution in case the plane should fail to be able to return for us, and before we left the East we made up a little waterproof album of a dozen aerial pictures illustrating in great detail every part of the route that we would have to follow to get out from the Walsh Glacier to Burwash Landing. We also secured a set of maps of the Logan area and the Chitina Valley and took them with us, mounted on muslin. Long talks with several members of the Mt. Logan Expedition familiarized us with all of the problems of the retreat down the Chitina River.

Our party was to consist of four men: Robert Bates, Russell Dow, Norman Bright, and myself. Bates needs no introduction to readers of this Journal. Russell Dow, of Woodsville, N. H., was a member of the 1933 and 1934 Mt. Crillon Expeditions, as well as having made glacial observations along the Alaskan coast with Osgood Field in 1935, and photographic flights for the National Geographic Society in the St. Elias Range in the winter of 1936. Norman Bright of Chehalis, Wash., had had no previous Alaskan experience but had done extensive climbing in the Sierras, the Cascades and the Olympic Mountains of the West.

Bob Reeve, our pilot, and Dow made three flights into the Walsh Glacier and cached all of our supplies safely there early in May at an altitude well over 8000 ft. These flights were made in a Wasp-equipped Fairchild 71 monoplane using skis, and operating off the snow-covered airport at Valdez, Alaska.

MTS. LUCANIA AND STEELE
Showing route of descent

MTS. LUCANIA AND STEELE FROM W.
Showing route and camp sequence

Photos, B. Washburn

LUCANIA EXPEDITION
(Right to left): Dow, Washburn, Bates, Reeve (pilot), Bright

AIRPLANE IN SMALL CREVASSE, WALSH GLACIER
Photos, B. Washburn

On June 18th, Bates, Reeve and I took off in Reeve's smaller plane (a Fairchild 51) on special skis from the Valdez mud-flats, and made a three-hour flight, landing on the Walsh Glacier successfully late in the afternoon in the face of a heavy southeast storm. The storm broke before we could get the plane unloaded and camp established, and both plane and pilot were marooned with us for five days on the glacier. During that time the temperature rose even at night to higher than 60°, and we were simply deluged by heavy rain and thunderstorms—as unseasonable and amazing as the occurrence of a summer rainstorm in Florida.

The surface of the glacier aged months in those few days. Myriad crevasses cut our 6000-ft. landing strip nearly in half and it was only after digging the plane out of four hidden crevasses and changing the pitch of the propeller that we were able to get Reeve safely off for Valdez again when the weather cleared. The original plan had been for him to bring in Dow and Bright on a second load, but the condition of the surface of the glacier was so bad that this plan had to be entirely abandoned. Dow and Bright never came in, and Bates and I were marooned on the surface of the glacier, with a mighty long walk between us and civilization.

Our predicament was made doubly serious by the terribly broken up condition of the lower Walsh Glacier, which was really our shortest way out to civilization and safety. We gave this up as too dangerous for two men to attempt alone. The only other possible way out lay over the summit of Steele or by way of a pass near Mt. Walsh, 10 miles S. of Steele. Although we had good aerial pictures of this valley, neither of us wanted very much to risk everything in trying to get down it. To fail and then to have to climb back over the crest of the range to replenish our food supply and to take another try elsewhere would have been well-nigh impossible.

We finally decided that the safest and surest way out would be over the top of Steele. Although this involved a first ascent of the W. side of the mountain, and climbing to a great altitude with heavy loads, we would at least have the assurance, once atop Steele, that others had safely reached that same spot from Burwash Landing, and where they had been up, we were convinced that we could get down somehow.

Arming ourselves with fifty days of food, a Logan tent and the minimum of climbing equipment, we abandoned practically all of our valuable photographic and survey apparatus at the Walsh cache, and set out for Steele on June 25th. Using a small ski-sledge, we dragged two loads of supplies to Camp II, at about 9000 ft., 5 miles up-glacier, and thence, working on foot, relayed our supplies ahead as rapidly as possible, reaching our fifth camp at the very head of the Walsh Glacier on the morning of July 1st. Up to that point we had had but few clear hours. It snowed and fogged almost incessantly and we were forced to have our camps very close together because of the labor of breaking trail. By having them only 2 miles apart instead of 5 or 6, and by relaying loads over the trail two or three shifts a day, we constantly kept our trail well beaten down, and despite the weather managed to make fairly speedy progress. We used willow wands constantly to mark our routes. Without them we would scarcely have been able to move at all.

Camp V was located on the floor of a superb basin at the foot of the great 4000-ft. wall dropping southward from the 14,000-ft. plateau beween Lucania and Steele. A narrow ridge or buttress rises up this wall, and it was by this that we felt sure we could reach the pass and thence the summit of Steele. An evening clearoff on July 1st permitted us to reconnoitre and mark a route up the lower part of the wall, advancing as we did so through a barrier of seracs to the site for Camp VI on the ridge at 12,500 ft.

At Camp V we threw away one of our sleeping bags, an air mattress, about half our gasoline, and a good many small incidentals that were not absolutely necessary. Climbing on the ridge was abominable. The snow ranged from knee to waist deep and we were completely fagged out when Camp VI was finally established later on the night of July 3rd. A 2-ft. snowstorm further complicated matters and made the steep upper part of the ridge particularly hard going in several places, especially as it was nowhere gently-inclined enough to let us use our bearpaw snowshoes.

After three relays to 13,800 ft. through heavy snow and dense fog, we dug ourselves in at Camp VII at midnight on July 5th. The following day, working with our aerial photographs and in dense clouds, we succeeded in worming our way around a very high serac barrier at the head of the buttress, and by noon had

WALSH GLACIER
Showing base camp and plane

CAMP II SHOWING MT. STEELE AND GREAT BASIN
Photos, B. Washburn

S. FACE OF MT. LUCANIA FROM CAMP VIII (14,000 FT.)

BACKPACKING TOWARD MT. LUCANIA AND CAMP IX

Photos, B. Washburn

willow-wanded a route to the Steele-Lucania pass. The only way in which we could tell that it was our pass was because the slope descended on the opposite side. One load that night and three the next day over the short, steep route between Camp VII and Camp VIII and we were finally established on the great divide later on July 7th.

Our only plan till that time had been to save our skins by a speedy retreat to civilization and safety over Steele. We knew that it would be hopeless to try to relay down the E. ridge of Steele. When we left this pass camp we must have on our backs everything necessary to get us out to Burwash with no relaying whatsoever.

We had there, however, about ten days more food than we would possibly need in our dash into Canada, and we decided to use this in a last desperate attempt to get Lucania, rather than simply to abandon our plans on the pass. We had worked unceasingly up to this point without a single day off, in hopes that we could use the bad weather low down and then profit by clear skies higher up where our every move depended on them.

Unfortunately, we were not allowed a very long rest. After a long sleep on the 8th, the weather suddenly broke. We loaded our camp rapidly onto our backs, leaving a cache of food and gasoline at the pass, and at ten that night established Camp IX at the very foot of the final mass of Lucania. We had been forced to descend about 1000 ft. on the N. side of the mountain in order to make a traverse and get camp at the bottom of a good route up the last steep slopes.

On the next day, climbing unloaded at last, we wallowed our way upward through interminable powder snow to the summit of Lucania, which we reached at 4.45 in the afternoon after nearly eight hours of continuous climbing.

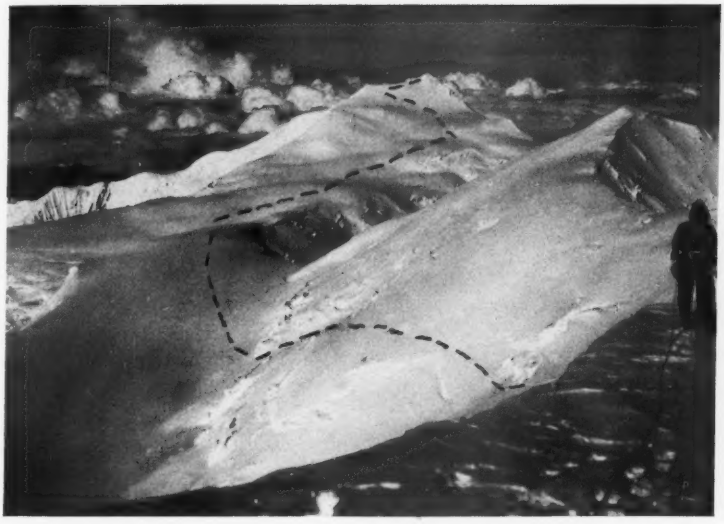
Space makes it impossible here to tell of the magnificent view from the top of Lucania. The temperature stood at close to zero and scarcely a cloud lay in any direction except to the E. over the great lowlands of Canada. Every peak in the St. Elias Range, from Bona 60 miles to the N. to Fairweather 225 miles to the S., stood out crystal clear. It was scarcely possible to believe that Logan was well over 30 miles away—its immense summit ridge and cliffs stood out in such colossal scale.

Late that night, stiff, weary but triumphant, we straggled into camp and had a royal banquet as the sun was setting in a glorious blaze of color behind the lofy crest of far-away Bona. Our long shot had been a success and Lucania was conquered!

Thrilled as we were with our success, we were by no means out of trouble yet. Sixty miles of mountain, glacier and muskeg, as well as the summit of Steele, still lay between us and our next sleep in a bed! On the morning after the climb we threw away nearly all our food, our largest cooking pot, most of our clothes, and cut half the floor out of the tent to save weight. By noon we had again reached Camp VIII, on another cool, clear, windless day. That night we reconnoitred and broke trail to a point 200 yards below the summit of Steele and left two 50-lb. loads where our willow-wand supply ran out at 15,500 ft. Almost every night above Camp V the temperature had hovered about zero, with the minimum of —14° the night before we had climbed Lucania. On the night of July 10th, an icy northerly wind bore down on our little camp. The thermometer dropped only to —9°, but the weather was so bitter because of blowing snow and cold that we did not get started till nearly nine on the morning of the 11th. That noon, with two 75-lb. loads, we made the 16,400-ft shoulder that we had reached the night before. Leaving our loads there, we climbed the final cone of Steele under ideal weather conditions. The St. Elias Range was again cloudless from end to end, except for a reddish haze—the certain forerunner of bad weather—over the peaks to the S. W.

One of the grandest thrills of our whole tiny expedition was the discovery now on the very tip-top of Steele, of a large bundle of willow-wands jammed on the highest snowdrift about two years before by Walter Wood. The fact that these wands had not been buried 6 inches in their long cold vigil on that exposed, snowy outpost is mute evidence of the terrific wind that must scream and lash across that desolate drift when the weather is not so pleasant as we found it on that balmy July afternoon.

After an exultant half hour rest on top of Steele, we returned to our loads at three o'clock. There we threw away from our 75-pound packs, food, our last spare clothing, the shovel, the tent pegs, our only air-mattress, and all the gasoline but three pints. We cut the entire bottom out of the tent and sliced off all the guy ropes as well in a last desperate effort to cut weight.



MT. STEELE FROM FINAL RIDGE OF MT. LUCANIA
Showing route of traverse

FINAL RIDGE OF MT. LUCANIA
Highest point not seen

Photos, B. Washburn

Photo, B. Washburn

BATES AND WASHBURN ON SUMMIT OF MT. LUCANIA

At 3.20 we started down the long E. ridge and, after an endless tussle with deep snow, ice and breakable crust, we finally pitched camp 9000 ft. below on a moraine at the head of Wolf Creek glacier at 8.35 that night. Continuing in general along the route followed by the Wood party two years before, we descended the glacier the next day to a point 2 miles below Wood's "advanced base" (Camp 6).[1] The night of the 13th saw us camped on the shores of the Donjek, 20 miles further toward Kluane Lake and Burwash Landing.

The crossing of the Donjek proved one of the most formidable obstacles and harrowing experiences of the trip. Its treacherous, icy waters, impossible at times to pass even on horseback, forced us to detour nearly 20 miles upstream before we could find a safe ford.

With food running low, we descended the E. shore of the river, bolstering our nearly empty larder with red squirrels and a rabbit killed with our six-shooters, and mushrooms picked in the woods at every rest.

On the afternoon of July 19th, as we were bogging our weary way through a swamp on the last pass before our goal, we met a friendly pack train which took us to a nearby cabin. There we feasted with them for twenty-four hours and thence rode in state to Burwash, each astride a pack-saddle on one of the most docile packhorses in all the Yukon.

That 35-mile ride will always linger in my memory as the most excruciating torture that I have ever endured. The proudest of mountaineers, unfortunately, may find themselves to be the very humblest of horsemen! The superb reception given us by Gene Jacquot at his Burwash Trading Post, however, will happily linger far longer in our memories than our limbs will bear evidence of the horrible ride. But we found our reward at the Trading Post. I have never eaten so much sheep steak or lemon meringue pie in all my life!

On July 20th, the beautiful silver Electra of Pan-American Airways dropped out of the skies to take us to supper in Fairbanks, and the Lucania climb was over. We had done what we set out to do, but by no means exactly in the way we had hoped we would do it!

[1] See *A. A. J.*, 1935.

Two factors more than any others contributed to our success. The first was the superb piloting of Bob Reeve, who, in landing us at the bottom of Lucania, accomplished four times in succession the highest freight landings ever made anywhere in a ski-equipped airplane. The second was the fearless determination and inspiring companionship of Robert Bates.

Photo, O. Houston

SUMMITS OF MT. HAYES
Grant Pearson leading

N. SUMMIT OF MT. HAYES
From first camp on ridge

S. AND N. SUMMITS OF MT. HAYES
From 11,000 ft.

Photos, O. Houston

Expedition to Mount Hayes

Oscar Houston

AN unsuccessful attempt to climb Mt. Hayes was made in August, 1937, by a party of four, Dr. Roger Whitney, Andrew Taylor, Grant Pearson and Oscar Houston. The expedition was defeated by the bad weather that prevailed rather generally in Alaska in that month.

Mt. Hayes, 13,750 ft., is the easternmost of the high peaks of the Alaska range. It lies about 100 miles south of Fairbanks, and is a conspicuous landmark from the valleys of the Tanana and Delta Rivers for many miles. So far as is known, no serious previous attempt had been made to climb the peak, but Bradford Washburn flew around it and photographed it from the air in 1936.

The party flew from Fairbanks on August 12th and landed on a natural gravel bar, made by the outwash of a small glacier on the northeast flank of the mountain. They then circled the northern foothills of the mountain for two days and established a base camp on the west slope of the N. ridge—a site that had been selected from Washburn's aerial photographs. The bulk of the supplies for the expedition were then dumped from a plane on a slope of fine scree in the trough between the ridge and the glacial moraine. The altitude of this base camp was about 5600 ft.; about 2000 ft. above the last timber. At the time of first arrival, the snow stopped about 400 ft. above the camp, but on the return from the climb the snow lay more or less heavily down to about 4000 ft.

On August 15th the party reached the crest of the ridge with light packs, finding a way up a shallow but very steep couloir filled with snow in which steps could be kicked, and the following day established the first camp on the ridge at about 7500 ft. The following day some of the supplies were advanced to the proposed site of camp two. Then followed three days of snow storm (August 18th, 19th and 20th) which prevented any advance. As the expedition had no scientific purpose, it carried no scientific instruments for determining wind velocities. However, during the greater part of one day at this camp the wind blew with such

force that the tents could not stand even in the shelter of six-foot walls of snow, and had to be lowered and weighted down with the duffle and rocks to prevent their blowing away.

The weather cleared on the afternoon of August 21st, permitting the advance of the remainder of the supplies and, on the following morning, the establishment of a second camp at about 8400 ft. Then followed three days of snow and storm (August 22nd, 23rd and 24th). During these days the snowfall was the heaviest experienced and formed drifts eight to ten feet high about the tents.

August 25th was the one wholly clear day of the entire trip and permitted the establishment of the third (and, as it turned out, last) camp at about 9500 ft., in a notch at the foot of the N. peak of the mountain (12,000 ft.). There was a beautiful sunset, about 9 P.M., with a long pink afterglow on the summit, and a view of Mt. McKinley, 150 miles to the W., rising like a dark blue saddle in the pink sunset.

The following morning was promising and Whitney and Pearson made a trail up to about 11,200 ft., while the others brought up the remainder of the supplies to the tent. In the afternoon, snow and wind began again, and continued for two days, until the afternoon of the 28th. By that time there remained food and gas on the ridge for only three days more and, as two days were needed for the descent, the party would have been in danger if another storm came (as in fact it did) and therefore began the descent in a light fog on the afternoon of August 28th. The party camped that night on the ridge and reached the former base camp the following afternoon. By that time the clouds again enveloped the upper part of the ridge, indicating that a fourth snowstorm was probably in progress, and this condition continued until the party reached Fairbanks (again by plane from the same bar) on September 1st.

The mountain consists of a long U-shaped ridge, the high summit near the center. The E. extension of the ridge is very long and contains several substantial peaks; it would be difficult climbing. The N. ridge is shorter, and contains only the N. peak (12,000 ft.) which it may be possible to avoid. The ridge is a knife-edge for substantially its entire length and the sides are uniformly very steep and show the tracks of avalanches over their entire area, so far as they could be seen on this trip. The easiest

and safest (and possibly the only practicable) route is by ascending the N. ridge near its end; that is the route actually followed. A way might be found up the E. ridge from the bar which the party used as a flying field, but this way would necessitate following a ridge about three times as long. The ridge, so far as seen, presents no particular difficulty, although in at least one place it requires delicate handling, and care is needed to follow a course avoiding both the cornice on the E. slope and the steep snow slope on the W. which has a marked tendency to avalanche.

The airplane is by far the best means of reaching the foot of the mountain. A packtrain coming from any direction would have to cross at least one large and dangerous river and traverse from 50-100 miles of difficult swamp and tundra, wholly without trails. In a winter trip dogs could be used, but the transport of their food would present difficulties. In April it might also be possible to land with an airplane on skis on the glacier opposite the base camp. At that time of year the glacier is probably covered with deep snow. Whether the additional snow on the ridge would prove difficult is another question.

Any future party should be able to make the ascent either if they had normal luck in weather, or were prepared to spend a month on the ridge.

Devils Tower

WILLIAM P. HOUSE

MATO TEEPEE—Devils Tower to the white man—must have inspired awe in many thousands, red and white, before impudent mortals snatched away some of its mystery. Rising in one tremendous shaft from a mount in the rolling plains of N. E. Wyoming it is more than a unique rock formation. It is so startlingly unreal as to defy description. As one looks at it its unreality grows until one wonders whether he is looking at a solid piece of rock or some strange sort of mirage.

The Tower itself rise 867 ft. from a mound which in turn rises 380 ft. above the plains. One thousand feet thick at its base it tapers but slightly to within about 200 ft. from the top. Then it breaks away so deceivingly that from below the angle of its walls seems to be maintained right to the summit. The symmetry of the Tower is accentuated by the graceful lines of the small columns which form its exterior. Emerging from the yellow pines like mighty roots anchoring the gigantic structure to the inner core of the earth they sweep in an exquisite arc to the lower part of the shaft. There they are regimented in straight lines which soar upward until they disappear in the curve of the summit. From dawn until nightfall the walls respond to the changes in lighting, varying from a brilliant rose to a sombre gray-green.

The first ascent was made in 1893 when two local ranchers[1] utilized a long smooth crack between two of the columns as one rung of a ladder 350 ft. long. By driving stakes into this crack and joining the outer ends with supports they were able to fashion a more or less substantial ladder over the most difficult part of the S. E. side. From its top to the summit they were able to proceed without great difficulty although many later aspirants were turned back at that point. Numerous ascents were made via this ladder until it fell into disrepair. It was rejuvenated in 1927 and used once more but Park Service policy[2] forbade further use and it has since been abandoned.

[1] *Appalachia* (1893), 216.

[2] Devil's Tower was set aside in 1906 as the first National Monument. It is administered by the Park Service in the Department of Interior.

Photo, Wonderful Wyoming Society

DEVILS TOWER

Route lies just beyond right skyline

PART OF THE 80 FT. CRACK

ABOVE THE GREAT COLUMN THE ROCK WAS MORE BROKEN

Photos, L. Coveney

Interest in climbing the Tower without the use of artificial aids found expression first in 1936 although previous to that date several climbers had looked at it rather closely. In September of that year a party consisting of Marguerite Schnellbacher, Percy Olton, Lawrence Coveney and Fritz Wiessner studied it carefully, but were prevented from actually attempting it by the impossibility of obtaining permission at that time from Washington. However, Wiessner, whose imaginative and competent eye could see possibilities invisible to others, had located a route which he believed might yield to rock-climbing methods unsupported by the aid of a ladder or other artificial means. During the following winter and spring permission was requested again and through the efforts of the A. A. C. and other friends it was finally granted subject to certain restrictions. As plans became more definite Wiessner and Coveney asked me to join them—an invitation which I was not slow to accept.

On the afternoon of June 27th, 1937, the three of us arrived at the Tower and studied the route picked out by Wiessner. On the S. E. corner—only 250 ft. S. of the remains of the ladder—were several columns which, being broken off at different heights, offered a break in the otherwise uniform upward sweep of the sides. These columns varied from six to eight feet in diameter and although probably originally octagonal had been rounded off until some of them approached a cylindrical shape. They formed the integral units of the rock itself, having been formed in the cooling processes in which the molten lava turned to solid rock.[3]

[3] Regarding the origin of the Tower, two general theories are held. One considers it the remains of an ancient volcanic neck or plug from which the enclosing walls have been eroded away leaving the more resistant core.

The other holds that the Tower is the remnant of a lacolith which molten spread out lense-shaped in the earth. In the process of cooling cleavage planes were formed at right angles to the surface of cooling—which was the top of the lacolith. This cleavage was responsible for the columnar structure of the rock as it appears today. As the solidified mass of lava was uncovered by erosion it became subjected to frost action and other agencies of disintegration which was more active along the cleavage planes than elsewhere. The result was that part of the columns were forced out of position and fell off in sections as units rather than as irregular masses. Thus the columnar structure of the rock has been maintained by the falling away of the outside columns and so exposing the inner ones. This process has gone on until today only a relatively small shaft marks what was once probably close to the center of the lacolith.

Both of these theories have strong exponents and the question is far from being settled. Possibly deep borings at the base of the Tower may provide a clue to its history. Until then or until some new light is shed on the subject neither theory can be proved definitely. The majority of geologists hold to the lacolith explanation.

On most parts of the Tower the columns lay so close to the rock behind them that only a very small crack separated them from it. Behind many of them no crack at all was discernible. However, on this S. E. corner some of the columns in addition to not being continuous to the top—as was true in most cases—were set six to twelve inches away from the face. It was the size of cracks plus the relatively short distance between the tops of the columns which suggested a possible route. It looked from below as though the tops of the columns might be gained successively by a series of *courte echelles* combined with some pretty stiff crack-climbing. We could not tell whether the tops of the columns were level or not, so a good deal depended upon what we could not see. If the cracks would go at all they would call for the most exhausting sort of climbing and we knew that it could not be maintained for indefinite stretches.

Having ascertained all we could through field-glasses we scrambled up the lower rock slopes and examined the bottom part of our proposed route. By craning our necks and steadying ourselves by fingertips on the rock we could see how to get to the top of one of the lowest of the columns. From there over the critical 200 ft. looked even more discouraging from below. We could make out the smooth rounded edges to the key cracks and they certainly did not make us shout for joy.

We fussed around for some time making tentative passes at an obnoxious gooseberry bush which obstructed the lower part of the route and as the tower turned grey in the fading sunlight we dejectedly made our way down to the cars. We did not feel like talking too much about it to each other, but our chances seemed much less than we had ever imagined they were even in our most rational discussions of the problem. Mechanically and with little zest we prepared our ropes and equipment for the morrow. After an insincere, though somehow heartening exchange of optimisms, we turned in. After all, the rock was supposed to be unclimbable the way we were going about it.

Six-thirty the next day found us at the base of the Tower marveling at the changes the eastern sun was making in the rock above our heads. Scrambling up the first slopes we came to a small ledge above which was our first problem—a shallow depression quite smooth and holdless in its lower part, exit from which was stoutly guarded by the gooseberry bush of last evening's

acquaintance. This shrub came as close to defeating us as any of the more orthodox difficulties higher up.

We had already decided on a three-man stand and indeed had spent many precarious minutes tottering in such a position on faces of the Black Hills Needles several days previously. Grimly Coveney made of himself a sturdy foundation upon which I climbed and, there being inadequate holds, anchored myself firmly to a piton. Up our bodies Wiessner nimbly climbed until standing tip-toe on my shoulders he was able to come to grips with the gooseberry bush. For long the battle raged while the pyramid groaned and talked of imminent collapse. At last the bush gave way and Wiessner was able to move into a cleft 18 ft. above the platform where we stood. So far so good. Coveney and I joined him as quickly as the lack of a pyramid and the bush would permit and together we were able to climb straight upwards for about twenty more feet.

This brought us to the base of one of the decapitated columns. Actually it was continuous down past our feet to the base of the Tower but at that point it had begun to cleave away from the face, leaving a wide crack. In fact, it now touched the rock behind it at only two points. Wiessner was able to gain a few feet elevation in the crack on the right side of the column, but an overhanging chockstone and the extreme smoothness of the walls decided him to return and traverse the face of the column. By this maneuver he was able to get in the same crack on the other side. We could almost touch hands through the crack so he unroped and the rope was passed through, giving him the ultimate in strong belays.

The other side of the crack proved less difficult and after certain difficulties with the rope due to chockstones he reached the top of the column—35 ft. above us. He reported it to be in good condition with room for us all. Of greater import he announced that a long crack leading to the top of the tallest column was accessible and that if it proved too stiff he could probably traverse to the far side.

Thus encouraged we joined him and all tried to appear unconcerned at what we saw ahead. To the right, separated from our platform by a gap of 6 ft., lay the most evil looking crack I have ever seen. For 80 ft. it went up practically without a break in its smooth edges. One side was the wall of rock—the other, the rounded corner of the column. The crack was vertical and varied from 6 to 9 in. in width. Only a chockstone dim in its interior

30 ft. up and a few irregularities on the wall gave the least bit of moral support. We felt it was very much needed at this point.

This crack—with the possible exception of several others to the left which we agreed *might* be climbable if one had to get up them badly enough—seemed to be the only practicable continuation of the route we had followed. On it converged both of the two possible routes we had selected from below. We had to admit what we had feared the night before—that if this crack would not go we would be unable to reach the top.

We were now on the steepest section of the Tower. On either side of us was a near-vertical profile from which there was no escape except via the crack or a long rappel. Up to this point the temperature had been ideal, but as the sun rose higher it beat down on us with such intensity that we realized our time on the face was limited. Sunstroke is not to be courted halfway up a precipice.

The platform was small, but adequate. Coveney put himself in good belaying position while Wiessner and I wrestled with the intricacies of arranging satisfactorily his double rope. When all was ready he climbed down from the platform and on feathery holds traversed over to the crack where he wedged himself securely and looked up. We both waited breathlessly. Then he started to climb. With back against the wall, his hands, arms, hips, knees and feet making all possible use of the crack itself, he moved slowly and with obvious effort. Twenty feet up he drove in a piton and continued almost without a rest. Still climbing slowly he seemed to move with greater ease and confidence even as he wriggled up what looked to us like the most difficult part. Incredibly he kept going, forcing himself up the crack with a power and rhythm that was beautiful to watch. The distance between him and the platform grew shorter and shorter until with a shout of triumph he hauled himself over the edge—his legs hanging motionless as he struggled for breath.

Coveney and I cheered and a shout arose from the crowd that had assembled below. Wiessner called down that it did not look too bad from where he was and that we had better come right up. Successively we came to grips with the crack and successively had to admit its superiority over our more modest powers—an admission of defeat hard enough to bear in itself, but made much less bearable when such fragments of conjecture as "Oh, the man's pulling him now" drifted up from the multitude.

Assembled on the top of the highest column we chose the only available route and worked our way up a shallow chimney which took off from our perch. The chimney ended in a sloping slab from which we were able to crawl to the right onto a sort of shoulder. Above the rock was more broken so we unroped and after traversing further to the right followed a more or less direct route to the edge of the summit mound.

With indecent haste we rushed to the top of the dome where we immediately broke into a long anticipated can of grapefruit juice. The summit itself belies the true character of the Tower it caps. Once in the center there was no suggestion of the appalling cliff that dropped away on all sides. We might as well have been on the top of a sagebrush-covered hump on the plain below for all the effect of grandeur there was. Quickly we set about collecting the data which we had given feebly as one of the justifications for our attempt. Pacing showed the summit dome to be approximately 400 ft. long by 200 ft. wide. There was an irregular shallow layer of coarse soil which supported a characteristically sparse growth of sagebrush, cactus and a few grasses. We collected duplicate specimens of most of the plants so that botanists could determine whether any independent development had taken place due to the barrier to seed presented by the height of the Tower above available sources. This was considered a possibility, but it is probable that high winds would be capable of carrying the seeds of most species found even to such an elevation. Search was also made for animal life. A Mormon cricket proved to be the only representative found, although a chipmunk had been seen much further down.

In the midst of this Coveney and I diverted Wiessner's interest long enough to set off a mammoth explosion consisting of several large salutes which we had, unbeknownst to him, secreted in my sack. Alas, what had struck us below as the most brilliant of ideas fell flatter than flat on the summit. When the firecrackers went off with a *phut* and a bang we saw no point in it at all and wondered dully which of us had been stupid enough to suggest such a dull scheme in the first place.

We knew the reason for our lethargy. We had ceased to sweat and the sun burning through clothes onto our skin seemed to be draining the last bit of moisture from our bodies. Clearly we should not tarry long on the summit. After the last troublesome cactus had been stowed in my pack we climbed as rapidly as we

dared down the broken rocks beneath the summit. The sun was worse now and in spite of the delay we used rappels in places which under other conditions we would have felt perfectly safe in climbing unroped. With the rock pulsating heat into our faces we reached the top of the highest column from which in a series of long rappels we covered the remaining distance to the base of the Tower.

There we were met by boys from the nearby CCC camp bearing countless canteens whose contents we swished down our throats and about our faces in a frantic attempt to kill the blistering heat of the past few hours. It was not until the cool of the evening after we had found much cold beer that we began to feel like human beings again. We agreed that the torrid memory of this climb would stand us in good stead in future efforts on mountains with opposite extremes of temperature.

Photo, Foresta Wood

RAPPEL OVER LAST OVERHANG IN DESCENDING FROM CAPE ROYAL ON WOTAN CLIMB

VIEW OF CRACK DESCENDING FROM CAPE ROYAL ON WOTAN CLIMB

LOOKING TOWARD SHIVA TEMPLE FROM NORTH RIM OF GRAND CANYON

Photos, Foresta Wood

Shiva Temple and Wotans Throne

WALTER A. WOOD, JR.

THE American Museum of Natural History Grand Canyon Expedition,[1] which for brevity's sake became known as the "Shiva Temple Expedition" or "The Lost World Expedition," had as its purpose the biological investigation of two buttes in the Grand Canyon which through the processs of erosion have become detached from the North Rim. Organized and led by Dr. Harold E. Anthony, Curator of Mammals of the Museum, it was hoped that the party would find that small animals had remained on the flat tablelands as they became separated from the rim of the Canyon and had become marooned there either through the physical barrier of sheer cliffs or a possible climatic barrier suggested by the 1300-ft. deep depression linking butte to mainland. If such turned out to be the case, then interesting comparisons would result between present day descendants of animals living at the time the buttes became isolated (roughly 25,000 years ago) and similar species inhabiting the Kaibab forest barely a mile and a half away.

A series of aerial photographs exposed over and around Shiva Temple and Wotans Throne, for so are the buttes known, indicated that the mountaineering difficulties to be overcome in reaching their summits might be considerable and at the invitation of the Museum, the writer secured leave of absence from the American Geographical Society to take charge of the climbing.

Although both Shiva and Wotan rise from the N. bank of the Colorado River (at about 2500 ft.) to the same general elevation as the North Rim itself (8000 ft.) it was by no means necessary to climb this entire height, for as mentioned above the ridge connecting butte and rim falls only 1300 ft. from the brink of the Canyon. In the case of Shiva it was a question of descending to the saddle and then climbing to the tableland. The descent

[1] *Note.*—A full account of the scientific aspects as well as a narrative story of the expedition, by Dr. H. E. Anthony, appears in *Natural History*, published by the American Museum of Natural History, vol. 50, December, 1937, pp. 709-22.

presented no difficulties whatsover of a mountaineering nature but involved considerable discomfort, as did almost every moment spent exercising below the Rim, through the extraordinary dryness of the air which, combined with the September heat of the sun, dehydrated us in a very short time. Water, being totally absent in this part of the Canyon, was carried in limited quantities due to its weight, and was rationed by the thimbleful. An example of this bodily dryness is afforded by the fact that among nine persons in the Shiva saddle after a late afternoon descent from the Rim, 12 gallons of water were consumed by the following morning, and it was drunk sparingly in proportion to thirst.

The climbing problem on Shiva Temple was limited to two steep bands of rock, the lower, formed by the Coconino sandstone of about 350 ft. in height and the upper, or Kaibab limestone, of somewhat lesser thickness. Steep talus slopes separated the rock pitches and abutted against the foot of the Coconino wall a few hundred feet above the saddle.

Of the two walls the sandstone appeared the more formidable but as we approached, it became more and more apparent that its difficulty was of a relatively low degree. Previously unobserved cracks came into view and the eye of faith could even discern a complete series of chimneys and terraces leading to the talus below the limestone cap. And so it turned out to be. Roped in two parties we progressed rapidly up the sandstone cliff checked only by the caution required in handling the miserable crumbling rock and maneuvering the rope so as to avoid injury to those below. Even our best efforts along these lines could not avoid an accident as a small rock dislodged by the second rope hit the man below and laid his scalp open, fortunately with no serious consequences. Near the top of the sandstone cliff we met with our first serious obstacle. From a firm base on a small terrace rose a 10-ft. cliff seamed with a crevice of fairly generous proportions. The difficulty lay not in climbing the crack, but in emerging from it, for in its upper foot was firmly rooted a luxuriant Mescal plant. I had been the butt of a good deal of bantering over my insistence on carrying an ice-axe up Shiva, but at this point strangely enough, nothing but the kindest remarks were to be heard as the axe came into use and demolished sufficient of the bayonets to afford a comfortable, if awkward, passage around them. Shortly after this episode we reached the talus slope below the limestone bed and,

as on close inspection this was even more broken than the sandstone wall, we all stood on Shiva Temple five hours after leaving our camp in the saddle.

Relatively easy though the ascent of Shiva was, it was anything but adapted to the transport of supplies and equipment so necessary for a protracted occupation of the plateau. Six packers from the Mormon community of Kenab in southern Utah were engaged to undertake this transport, and did so efficiently and well. They were, however, spared inestimable effort and time through the coming into play of the aerial unit of the expedition. Miss Amy H. Andrews of New York very kindly put her services and her Stinson plane at the expedition's disposal for the dropping of supplies by parachute to the party on Shiva. Five loads were dropped of which four were entirely successful while the fifth either through my own underestimation of a rope's strength or the faulty tying of a knot, broke loose from its parachute and crashed with extraordinary thoroughness on Shiva's "Airport." Thus were eighty pounds of food, including a dozen eggs, and twenty gallons of water (about 200 lbs. with containers) delivered to Dr. Anthony and George B. Andrews.

With the scientific party atop Shiva and provisioned, the climbing unit turned to Wotans Throne which was to be investigated after Shiva Temple. Here indeed was a climbing problem. From an examination of pairs of the aerial photographs in a stereoscope no obvious line of approach presented itself. In the first place no saddle links Wotan to Cape Royal on the Rim but rather a long nearly horizontal ridge abutting squarely against the wall of the canyon some 500 ft. below the rim and similarly against Wotan below the Kaibab limestone which caps the butte. Nor, even if attainable, could this ridge be followed with any likelihood of success for at several points along it deep clean gashes have been carved into it and all of them present overhangs and a tendency to smoothness which sent our inquisitive glances searching elsewhere for a possible route. The ridge drops vertically on both sides for at least 450 ft. and it was obvious that in order to climb Wotan we would have to descend below it, follow its lower margin and try to break through an apparent lessening of slope where it joins the butte.

From the South Rim of the Canyon we studied the defenses with field glasses and discovered a single weakness in the wall. Immedi-

ately below Cape Royal a deep fisure splits the Coconino formation and we felt that if this could be followed we would at least gain access to the rocks of Wotan itself.

The climbing party, the same which had climbed Shiva the week before, consisted of Mrs. Wood, Elliot S. Humphrey, George B. Andrews and Preston Swapp, one of our packers, in addition to the writer. Taking off from Cape Royal we made good progress downward until we were through the limestone bed, and then following along a talus slope we reached the top of the fissure or, more correctly, couloir. What from the South Rim had appeared a mere crack on close examination proved to be a dry water course. Square cut, about twenty feet wide and fifty deep, the average inclination throughout its 450 ft. of height was about 50°. From the top it was impossible to see what lay below due to the first of what turned out to be a series of overhanging steps. To make a long story short the descent was accomplished by five rappels, four of which were over fifty feet in length. Fortunately we had sufficient rope as a single line had to be left on three of the overhangs to ensure our return.

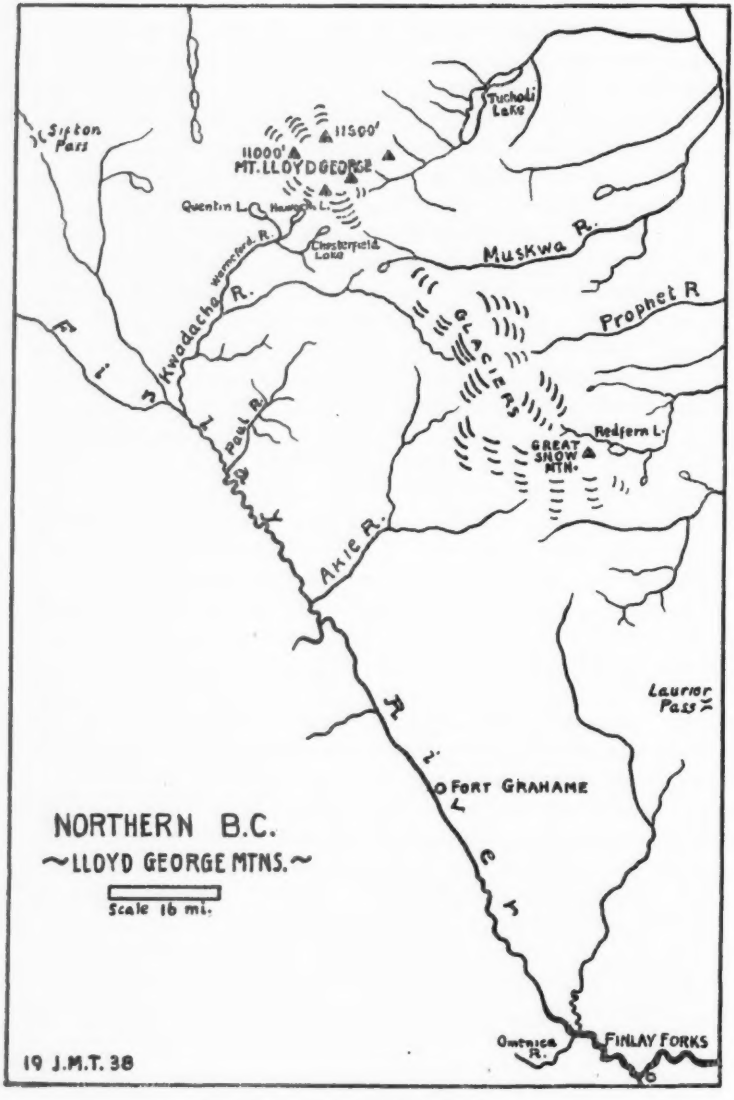
Having left Cape Royal at noon it was twilight before the last load and climber swung over the final pitch and onto the talus slope footing the Coconino wall. Insufficient light remained to scout out a flat camp site and each of us picked out what he considered the best of the available sloping accommodation for his bed. A roaring campfire offset the chill which descends on the Canyon after sunset and we sat around it late into the night, marvelling at the shadowy beauty of the moonlight as it played on the ridges and spires around us, and later when we rolled up in our blankets, each in his separate cranny, I'm sure I was not alone in watching three bright stars move slowly into the square-cut patch of sky formed by the chimney vertically above us, and one by one eclipse themselves.

Shortly before dawn, Humphrey rose and lighted the fire and on being asked the reason for such early enthusiasm, announced that he had been unable to sleep for the past hour. The explanation was immediately forthcoming. We had constantly been on the watch for rattlesnakes and though extremely rare along the North Rim we were prepared for any encounter which we might have with one. On this particular occasion Humphrey had been awakened by something crawling onto his blankets and lying still.

Fearing the visit of a rattler searching warmth, a by no means unknown habit of the snake, he played dead for what must have seemed an eternity; then at the first signs of dawn the visitor departed, and cocking an eye over the edge of his blanket he observed a large skunk meandering off down the slope.

Seven o'clock found us making our way along the base of the Coconino wall towards Wotan. Progress was rapid and in an hour we reached the foot of the junction of the ridge with the rocks of the butte. Roping here and replacing nailed boots by *Kletterschuhe* we worked upwards with little loss of time towards a deep notch in the ridge. The climbing was harder than on Shiva but nowhere really difficult. All untoward remarks about the ice-axe had long since been discontinued and on several occasions it played a vital part in demolishing cacti lodged in cracks. On gaining the notch we found ourselves above the sandstone wall and with only the limestone cliff separating us from the tableland. However, contrary to the case on Shiva, the final 350-ft. wall swept round unbroken and we traversed along the western face, following the top of a steep talus slope to the foot of a buttress which offered the only possibility of ascent. This gave us the pleasantest climbing of the entire trip. The rock was rough and firm. Holds were scarce but available and the buttress soon narrowed down to become a ridge of almost knife-edge proportions falling sheer on either side to the talus above the sandstone. It was over all too soon and at noon we were lighting our signal fire and listening to the thin far-away calls reaching us from the animated specks on Cape Royal a mile and a half away.

We camped that night in our sloping perch below the chimney and the following morning made our way up the series of fixed ropes to the Rim to be greeted by an assortment of liquid foods, brought out to Cape Royal by friends, for which none of us will ever be able to show ample appreciation.



THE LLOYD GEORGE MTNS.

Based on "Northern British Columbia" (Dept. of Lands, 1933), with additions by D. Phillips

The Lloyd George Mountains

J. Monroe Thorington

BECAUSE of improved transportation facilities by airplane, the unexplored region of British Columbia between the Finlay, Peace and Fort Nelson (Liard) Rivers is of increasing interest to mountaineers.

The Parsnip and Finlay Rivers, whose junction at Finlay Forks forms Peace River, occupy the orographic depression of the Rocky Mountain Trench N. of the great bend of the Fraser River. Peace River forces a way through the mountains to the eastern plains just as does the North Saskatchewan, the true Cordilleran axis (here the Pacific-Arctic watershed) having deviated westward of the Rocky Mountain Trench at Giscombe Portage. The mountain region under consideration lies 300 miles due N. of the Fraser bend.

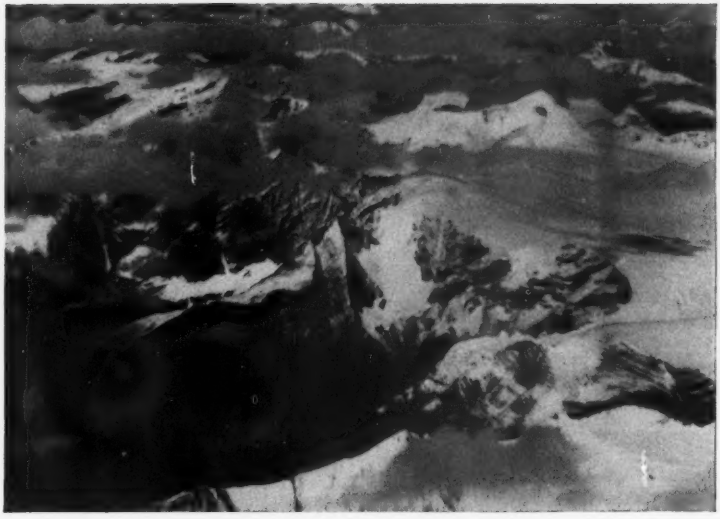
John Finlay, of the Northwest Company, in 1824 ascended the river which bears his name as far as the Thutade Lake source (*Journal,* formerly preserved at Cumberland House, from which extracts were made by J. B. Tyrell). In 1873, Capt. W. F. Butler followed up the Omenica tributary (*Wild North Land,* 1874). R. G. McConnell, of the Canadian Geological Survey, in 1893 mapped the upper reaches of the river and was the first to observe the glaciers forming the source of the Warneford (N.) fork of Kwadacha River (*Ann. Rept. Geol. Surv. of Canada,* 1894). In 1912, F. K. Vreeland, exploring for the Biological Survey, reached Laurier Pass with pack-horses from Hudson Hope (*Geogr. Rev.,* xlvi, 2).

In 1916, P. L. Haworth made an extensive canoe journey from Hansard, in the Fraser Valley, to Finlay Forks and Fort Grahame, following up Finlay River and reaching the forks of the Kwadacha, from high ridges above which he saw the expanse of glaciers (*Scribner's Mag.,* June, July, 1917; *On the Headwaters of Peace River,* 1917).

The Fox River tributary of the Finlay, within the Rocky Mountain Trench, is connected by Sifton Pass with the Kechika branch of the Liard River. The ranges run parallel to the Finlay,

with peaks of the E. side of the system bearing more snow than those on the W. slope. Haworth named the highest summit Mt. Lloyd George. From his viewpoint in the E. angle between the Kwadacha and the Finlay he could see the entire unexplored region from Laurier Pass (S.) to Liard River (N.). There was no peak "taller than Mt. Robson. . . Much the finest of all these lay far to the N. E. . . . with three great summits, two of them peaks, the third and tallest an immense block . . . down the S. slope of it, filling a great valley, miles wide and miles long, there flowed a perfectly immense glistening glacier. . . It is the biggest thing in the whole Finlay country . . . I venture to predict that when the glacier has been more closely examined it will be found to be one of the biggest, if not the very biggest, in the whole Rocky Mountain system." S. E., apparently on the extreme E. side of the system, he saw a snow-capped mountain, possibly identical with an imposing snow mountain reported by Vreeland as being somewhat more than fifty miles N. W. of Laurier Pass.

In 1919, Haworth returned to the region, accompanied by A. P. Chesterfield (*Scribner's Mag.*, June, 1920). Fort Grahame is 65 miles upstream from Finlay Forks, the Kwadacha, the main feeder of the Finlay, joining the main stream 96 miles further N. Ascending the Kwadacha, they crossed a ridge in its upper course to reach Chesterfield Creek and Lake in one of the terminal forks of Warneford River—whose other sources are in Quentin and Haworth Lakes. Quentin Lake receives the drainage of the more northerly glaciers, reported by McConnell. Chesterfield Lake drains three tongues coming down directly from the peaks of Mt. Lloyd George, and, even allowing for retreat of the ice since Haworth's visit, it is apparent from his published photograph that the mountain would offer no serious difficulty to a competent climbing party. Haworth wisely and conservatively contents himself with estimating Mt. Lloyd George as "above 10,000 ft." He indicates that a long terminal branch of the Kwadacha encircles three-quarters of the massif to have its source on the E. or S. E. side of Mt. Lloyd George, and it is the drainage into this branch which accounts for the "white water." In the snowfields extending S. E. it is probable that Akie River has its source, and near this is the location of Vreeland's peak. The following mountain names from Haworth's sketch-map are included in the *Geographical Gazetteer of British Columbia* (Dept. of Lands, 1930): Mt. Lloyd



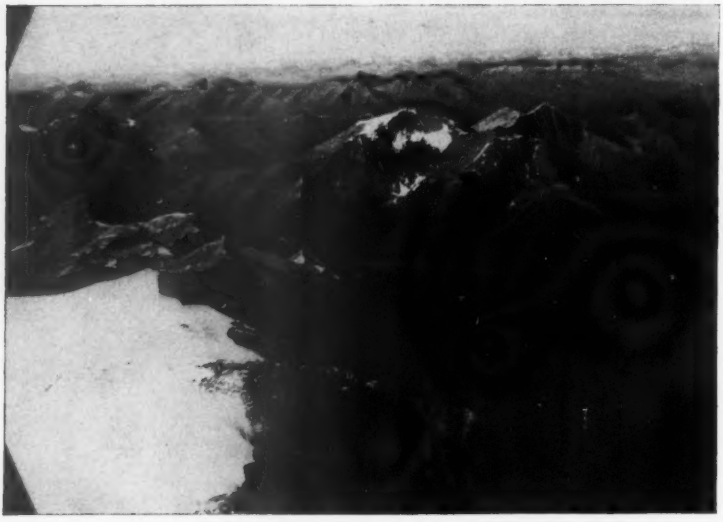
MT. LLOYD GEORGE AND SNOWFIELD FROM N.
Gorges in left foreground drain to Tuchodi Lake

MT. LLOYD GEORGE, LOOKING S. E. ALONG CREST OF MAIN DIVIDE
Drainage to Muskwa River seen below cloud level

Photos, S. L. Diack

FOREGROUND PEAKS AT S. E. ANGLE OF LLOYD GEORGE SNOWFIELD

From plane at 13,200 ft. Horizon peaks at right in direction of Redfern Lake. Muskwa Glacier and river flow from snow saddle in foreground to valley in left center



LOOKING S. E. ALONG LLOYD GEORGE SNOWFIELD INTO KWADACHA-FINLAY JUNCTION

Haworth Lake in right foreground

Photos, S. L. Diack

George (Lat. 57° 45′; Long. 124° 43′), Mt. Haworth, Mt. Luke, Mt. Holben, Alcock Mtn., Chesterfield Mtn. Elevations are not given.

Early in 1937 the present writer learned that Donald ("Curly") Phillips expected to fly from Finlay Forks, with Drs. L. B. Kingery and S. L. Diack, for a hunting trip on Prophet River, and asked Mr. Phillips to make all possible observations of the Lloyd George region, which would be close at hand. What follows is his account, his sketch-map being entered on the 1933 map of Northern British Columbia (16 mi. = 1 in.), Dr. Diack kindly furnishing the flight photographs.

Starting out from Finlay Forks we had hardly reached our elevation of 13,000 ft. before the big peaks and glaciers of the Redfern and Akie loomed up a little to the right of our course, and a little later the Lloyd George mountains came out of the fleecy clouds, and as we got closer the icefields started to show up.

Looking down on the icefields that surround the Lloyd George peaks, I realized that I could form no estimate of distance from the plane, so I timed it as we flew past to the E. of the snowfields and peaks, and it took just ten minutes. But the longest way is from S. E. to N. W. What looks like the highest peak is on the N. W. corner of the snowfields, with another S. E. of it, with drainage into both Haworth and Quentin Lake branches of the Kwadacha River. There are two or three more peaks on the N. W. corner of the snowfields, with drainage into the Muskwa River, Tuchodi and Haworth. The longest tongue of the glacier comes down to the Muskwa, and has the easiest gradient. But there is no landing for a plane on that side.

Going in I estimated that we were about 1500 ft. above the peaks, but that was only a guess, although the pilot said that would be close to it. To get something more definite going back, the pilot set his altimeter at Zero on Tuchodi Lake to check its elevation at Finlay Forks, a known altitude. We then raised 9000 ft. and crossed the icefields about the middle, with the peaks on both sides of us. Midway across we were just level with the peaks, as looking over them we could just see the horizon in the distance beyond Sifton Pass. Checking at Finlay Forks we found Tuchodi Lake to be 2960 ft., and the highest peaks of the Lloyd George group approximately 11,500 ft., which is high even in the Columbia icefields.

It hardly seems possible that these mountains can be so high, but we checked it both ways, and cannot be very far out, as we had perfect weather both times and there should not be much variation in the instruments.

Coming back we skimmed over the icefields and directly over Haworth Lake, which is four or five miles long and a good landing place for planes. It is about 4000 ft., and leaves plenty of hard climbing to get up to the snowfields, as it will be mostly rock since the glacier does not come down anywhere near the lake. We passed too fast to get any real idea how difficult it will be to get up the rocks, especially as we were directly over the route that would have to be taken. You cannot see much under a plane.

All climbing will be tough in that country from treeline to the snowfields, and you will have to camp thousands of feet above timber or wood to do any actual climbing. The snowfields are clear of crevasses except where the glacier tongues lead down, and there will be miles and miles of snow travel between the peaks. The peaks are all snow ridges, with knife-sharp crests right from the snowfields to their summits. From two of the peaks on the S. E. corner there are two of the longest medial moraines I ever saw, coming down to the big tongue that goes into the Muskwa.

Sizing it up on our two flights I am of the opinion that it is the toughest climbing proposition in this country. By that I don't mean it is dangerous, as the peaks look fairly easy once you get up to them. But the distance from base camp to icecap is the great endeavor and calls for a lot of rock climbing, possibly water and ice worn. Once up you have arctic conditions and miles of snow travel from peak to peak. It looks to me as if skis would be the logical method of travel once you were up on top of the icecap.

The main snowfields and glaciers in that country seem to be in the S. E., toward Redfern Lake. We could see these icefields at a distance of 50 miles or more, and trappers we met said there were places you could travel 30 miles or more on continuous ice. This is at the head of the Akie, and the main branch of the Kwadacha, which is not on any of the maps, but is the one that carries all the glacial water that muddies the Finlay. The other two branches coming from Haworth and Quentin Lakes are quite clear, just as Haworth states.

It only takes two hours to fly in to Haworth Lake from the Forks, and although we used a small plane with only 800 lbs.

carrying capacity, they have a large one operating out of Fort St. James that carries a couple of tons. That is the only way to get in there, as it takes a month each way with horses. It is a safe flying route, as you have landing water under you most of the way, with only a few minutes over land from Whitewater to Haworth Lake.

There are quite a few peaks along the main range N. of Lloyd George that will go to 10,000 ft., and, boy, they are rough; it is the roughest, toughest country I was ever in, with glaciers at the head of nearly every creek!

From the foregoing, even allowing that official altitudes will be lower than estimates, it is evident that the Lloyd George area presents a challenging new field for mountaineering. Curly Phillips will arrange airplane transportation and accompany an expedition desirous of visiting this snowclad range. There is certainly a low glacial pass across the group between the heads of Muskwa and Kwadacha Rivers and, if the size of glaciers is an indication, it is probable that lofty peaks, possibly rivalling Mt. Lloyd George in elevation, will be found in the S. E. part of the group.

Summer Ascents of Columbia, North Twin and Farbus

STERLING B. HENDRICKS

IN the 200 miles between Mt. Robson, of the Northern Canadian Rockies, and Mt. Assiniboine to the S., the Continental Divide passes over two of the seven highest summits, and to within 10 miles of the remaining five. These five, in order of height, are Columbia, North Twin, Clemenceau, Forbes and Alberta, and all lie within 30 miles of Mt. Columbia, which is squarely on the Divide, only 6 miles west of the hydrographic apex of the continent at the head of tributaries of the Columbia, Athabaska and Saskatchewan Rivers. Glaciation of the Rockies is heaviest in this region and an almost continuous passage could be made on ice from the tongue of the Saskatchewan Glacier to that of the Clemenceau 35 miles to the N. W. From the top of Columbia, however, the eye is attracted as much by the deep valleys as by the high mountains and great icefields; the vertical extremes differing by more than 8000 ft. within 7 miles.

Accessibility of this region from the Banff-Jasper highway, which passes to within a few hundred yards of the tongue of the Athabaska Glacier, was responsible for our selecting it for a mountaineering vacation. On the late afternoon of July 4th Rex Gibson's faithful car, after being pushed and pulled, reached the end of the road at Camp 23 out of Jasper. We four—Kenneth and Hugh Boucher being our companions—piled out and mustering all our courage attacked the pile of baggage in the trailer. The plan was to place a camp on the icefield and to climb from that as a base, using skis for the approach.

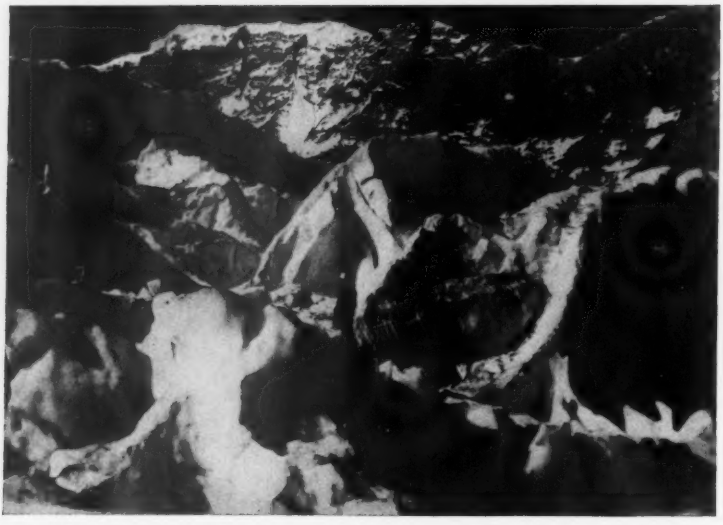
Camp was established next day at 9000 ft. just beneath the Snow Dome, whose summit is the hydrographic apex, and above the upper icefall of the Athabaska Glacier. In the evening Gibson and I skied to the crest of the icefield, about 1000 ft. above camp, and saw for the first time the immense panorama that had been in our minds for so long. Mt. Forbes stood out as a symmetrical white pyramid far to the S., and Bryce and Columbia filled the S. W. horizon. The snow was in perfect condition for the run

APPROACHING MT. COLUMBIA FROM THE ICEFIELD

S. TWIN AND MT. COLUMBIA
From summit of N. Twin

Photos, S. B. Hendricks

MT. ALEXANDRA (LEFT) AND MT. OPPY (RIGHT)
From Mt. Farbus



LOWER ICEFALL OF E. ALEXANDRA GLACIER AND E. FACE OF MT. FARBUS
Photos, S. B. Hendricks

back to camp, and even my inexperienced soul was transported with joy between the occasional tumbles.

Equipment was none too good for sleeping on the snow, so it was with an air of relief that we left camp the next morning and headed for Columbia. Lowering clouds were disregarded for the ecstasy of the swinging skis over the crusted snow. Two and a half hours from camp we had descended to the head of the basin above the Columbia Glacier, and there, with a mistaken idea of distances, we decided to leave the skis and continue on foot. Some god of the storms forewarned us to exercise the precaution of taking compass bearings. The base of Columbia was reached by 10 o'clock, but then the clouds settled, and shortly afterward wind came up and snow began to fall. Hope died slowly, and when retreat started all tracks had been obliterated. It was my lot to walk into the white void while Gibson tried to keep the compass on the line and call the changing bearings. Visibility was usually down to about 100 yards, and the return trip, which had more than one moment of suspense, took eight hours.

The storm continued throughout the night, and it was not until July 8th that another *sortie* was made. On that day we casually climbed up into the fog and hunted around for the top of the Snow Dome, which was found at 1.15. The first ski-ascent of Snow Dome was made by Russell Bennett, Clifford White and Joe Weiss in March, 1930, traversing the 16 miles from old Camp Parker. Low clouds lifted, and unmindful of previous blind travelling we ran down the N. slopes of the Dome and headed over the undulating icefield toward North Twin. Skis were left about a mile below the base of the mountain and crampons used over the icy slopes above the gorge of the Columbia Glacier. The summit, 12,085 ft., was reached at 7 P.M., after the usual experience with the crevasses on the top. Even though the hour was late and camp was fully 8 miles away, the view could not be denied. A storm passing to the north accentuated the wildness of the scene, dominated by the black mass of Alberta, easily the most worthy of those seven high mountains. Intricate patterns of the Athabaska River in its flat spruce-covered valley 7000 ft. below seemed to be hardly a stone's throw distance. Camp was regained at 11 P.M., after an exciting descent of the final slope in the dark.

Hugh had lost a ski the night before, so only three of us set out toward Columbia at the comfortable hour of 9.15. The day

was crystal clear, but the snow was alternately crusted and soft. This time the skis were used all the way to the base of Columbia, which was reached at 2.30. Steep snows of the rounded E. side were softened by the hot sun and steps had to be planted in the ice 2 ft. down. Some central rocks were finally gained and these led up to about 50 ft. of steep ice. Gentler slopes of hard wind-blown snow brought us to the summit, 12,294 ft., at 5 o'clock. This was more than a usual summit for Gibson and myself, since it completed for us the list of 12,000-ft. peaks, Robson and Clemenceau having been climbed the year before. All of them are ice and snow climbs over not too steep slopes, and in general the will to climb them should be enough for success, but vagaries of wind and weather warn for caution on all.

Descent was by way of the S. ridge, the steep step of which forced us out on the sliding snow curtain to the E. This, incidentally, was the first traverse of the mountain and the first time that it had been climbed in moderate comfort, other parties having started from the distant base of Castleguard Valley. The run back to camp required only three hours, control being a limiting factor on the crusted snow.

Our next plan was to reprovision and then head south; Gibson and I hoped to reach the A. C. C. camp in the little Yoho Valley by a high glacier route. The junction of the Castleguard with the Alexandra River was reached on July 12th, and here Ken and Hugh turned back, their vacations being limited. After rafting the Castleguard and bridging the Alexandra at its box canyon, we set out through wet bush for our next adventures.

The selected route was to follow the N. E. Lyell Glacier, cross to the S. E. glacier, and was then to gain the Lyell icefield by a steep icefall down to the S. E. glacier. Three stormy days were spent on this venture and we came back hopelessly beaten. The icefall was too active for safety with heavy packs, the cliffs topped with ice were impossible, and an attempt to descend to Arctomys Creek ran afoul of the worst jumble of ice and cliffs that we had ever met. Since our plans did not reckon with failure, it was necessary to forego the pleasure of a possible try at Forbes, number five in height, and turn back to the North. Consolation was sought by climbing from the head of the Alexandra River, Mt. Oppy being especially attractive. This is a wonderful scenic region, but unfortunately it is on the steep cirque side of the mountains and

wide detours must be made to reach nearby peaks; even Outram and Kaufmann found the trip to Mt. Alexandra an extremely long one.

On July 17th we made the first ascent of Mt. Farbus (10,550 ft.), a peak on the Continental Divide between Mt. Alexandra and the Lyells. Crampons were used straight up the center of the four icefalls of the east Alexandra Glacier. The upper part of this glacier is narrow and is exposed to active avalanching ice cliffs of the N. Lyell Glacier and of the summit ice mass on Farbus. During our passage an avalanche of Himalayan dimensions came off the wall of the N. Lyell Glacier, and several new tracks had to be crossed. The col between Farbus and peak three of Lyell was reached at solar noon; a compass being the only functioning timepiece.

It was an easy matter to follow the flat quartzite ridge to the top of Farbus, but there a disappointment awaited us. Mt. Oppy was cut off by a 500-ft. cliff that made any prospective route unduly hazardous. However, the view was an adequate reward for our labors. Again, valleys were more fascinating than were mountains; the Alexandra being visible to its junction with the North Saskatchewan on the east, while Lyell Creek and the Bush River led the eye down deep V-shaped valleys to the Columbia River, 10,000 ft. beneath us in the west. The view to the south was blanketed by the Lyells, but Bush Mtn. and the Selkirks beyond it stood out to the southwest.

I have often wanted to try the mathematical trick of dropping a perpendicular and sliding down it, but am afraid that it must wait for more celestial mountains. Lacking this, there was no alternative but to return to camp by the way of ascent. Something close to a record was established in recrossing the avalanche tracks.

The next day was one of storm, during which we explored the main Alexandra Glacier in the faint hope of finding a direct way to Mt. Oppy. Deciding in the end that the region was a snare and a delusion, we packed up everything except the dried corn and started through the bush up the west bank of the Castleguard. A convenient box canyon was bridged in lieu of a potential ducking or endless bushwhacking. Final good luck provided us with supper and royal transportation at Sunwapta Pass, where the trail met the road, and we made Jasper on the night of the second day from the Alexandra. Storm and ghosts of many a packtrain pursued us to the end.

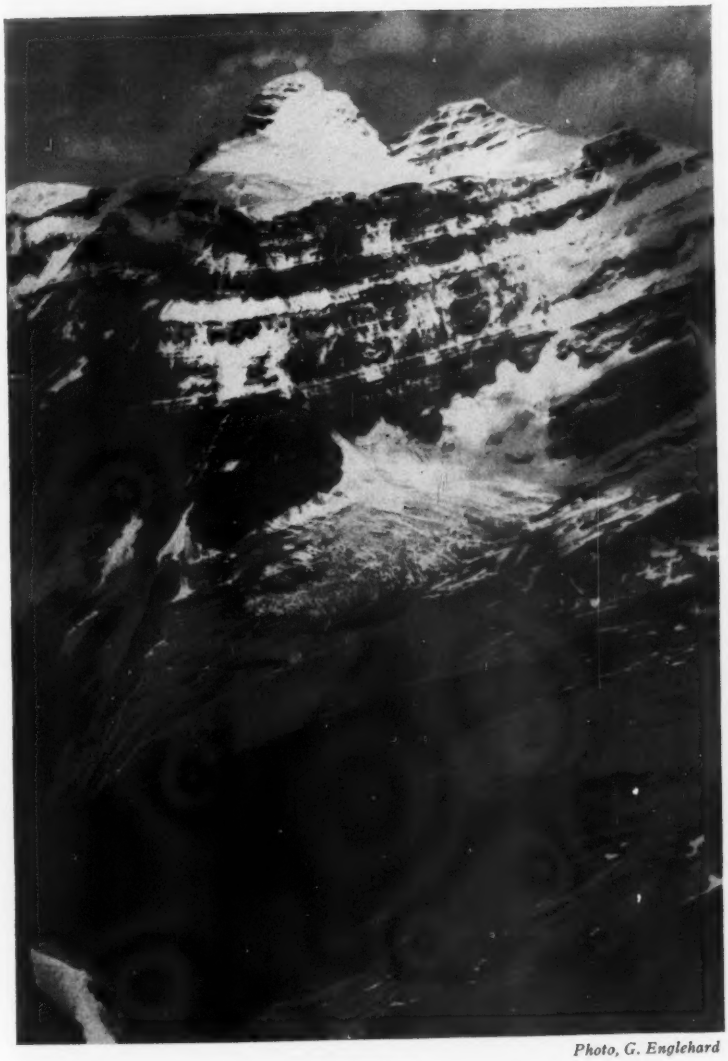
Second Ascent of Mount Bryce

LILLIAN GEST

MT. BRYCE, 11,507 ft., overlooks the Columbia Icefield from the S., but had been climbed only once. From Rice Brook on the British Columbia side, it promised to be a fine snow and ice climb; from there also, climbers need not approach it by miles of monotonous snow tramping over the icefield, a penance many of the neighboring peaks demand. For these reasons, Miss Kate Gardiner and the writer chose it as the objective of a climbing trip north this summer. We had looked forward to going since 1933, but in the end the arrangements were only made at the last minute by telegraph to Lake Louise in response to a cable to Philadelphia from New Zealand.

The Lake Louise-Jasper Highway is now open to autos as far as the 36-mile post, so the party assembled there July 22nd for a four weeks' trip. With us were the two Swiss guides, Edward Feuz and Christian Häsler. Jim Simpson and his men had charge of the outfitting and horses. We formed quite a caravan as we continued on the new road in various stages of construction down the Mistaya and up the Saskatchewan River. In four days we reached Thompson Pass, whence Sir James Outram with Christian Kaufmann had made the first ascent of Bryce in 1902. Their long and arduous route had discouraged other climbers. Only once had it been attempted again; in 1929 by Col. Amery and Edward Feuz from Rice Brook, but failing to reach the summit.

From Watchman Peak, S. E. buttress of Thompson Pass, we picked our route up Mt. Bryce. From here, there is as fine a view as any in the region. With the glasses we found Mt. Trident on the Big Bend of the Columbia River. We had been on its summit eight days before. It was now only 35 miles away, but we had traveled over 200 miles, about 60 of them by packtrain to make that distance. The icefields lay before us, and Mt. Bryce, with its E. ridge a double curling cornice. It was plastered with snow, the bergschrund showing up beautifully but covered entirely at the left side. The corniced ridge on the right was out of the question, but across the face ran several ledges of snow, one of



Photo, G. Englehard

MT. BRYCE
From Watchman Peak

Photo, S. B. Hendricks

N. FACE OF MT. BRYCE
From Columbia Icefield

Photo, K. Gardiner

S. W. CIRQUE OF MT. BRYCE
Route was up glacier, with traverses on rocks to right

which might lead to the left ridge and thence to the summit. The view of one section was obscured by a rock buttress. That might not go, but we felt the chances were good. Edward's old route with Amery was straight up the snow towards the long sloping right ridge. They had turned back because of weather. Now in one spot above that route an ominous break in the snow indicated it sometimes avalanched there. Chris pronounced our proposed route "duck soup." It didn't look like "duck soup," but we were all content. Seven or eight goats paraded past us on our way back to camp.

The next day we moved a small camp 2.5 hours down Rice Brook. Jim Simpson had spent two days clearing out most of the old Boundary Survey trail and there was cutting to do now only for a short distance. One-quarter mile above the junction with South Rice Brook we camped, with a tumultuous stream running by our cook fire, so that we had to raise our voices over it to be heard. Flowers lined the rocky shore along the creek, a clear stream trickled out of the woods above and a wild little canyon choked with deadfalls was just upstream. It wasn't much of a campground but we were to be there just three days, and Mt. Bryce towered above us. "Bryce or bust," says Jim, and we agree. But we little knew it would be two weeks later before we left that camp. The horses were sent back to the pass.

Promptly in the morning we left for a bivouac on Mt. Bryce. Striking a diagonal route up through the timber we found the bushwhacking easier than we had expected. Jack Harris, the wrangler, had come with us and he blazed the trail for his own return. Anyone who goes in there now, will find blazes, but only one way. Before noon we were up at timberline. The trees were very large and instead of decreasing in size as one goes higher, seem to just stop. The men found a snug spot by a big spruce and put up a grand lean-to. In the afternoon they scouted the route up the moraine and glacier while Miss Gardiner and I took naps. By 5.30 it was quietly raining. We should have gone home, but it was such a surprise to us that we could not believe it would not stop and we waited. We did come home the next morning as soon as it was light, soaked to the skin after a not too comfortable night.

One is hemmed in by mountains on three sides of Rice Brook, but down the valley there is a patch of open sky. I wish I knew

how many storms we watched apparently starting there, and how many times blue sky hopefully appeared only to be engulfed by another storm. Teepees are delightful tents and one can sit and think or read or just sit, throwing on the wood from the ample pile at the door as the fire burns down. The rain patters on the canvas but seldom comes in at the top. We came to know it very well there on Rice Brook, and the stony flat became very familiar ground. Straying further from camp, one soon became soaked by the bushes even if not caught in the actual storm. After five days of it, we started out in clouds and wet bushes to try Mt. Queant, 10,200 ft. and unclimbed.

There is a moose-trail up part of S. Rice Brook, starting just beyond an old campsite on the stream bank. Above the little canyon, we came across the old survey blazes and Conrad Kain's trap line, one of his old traps still hanging on the tree. Marten tooth-marks were visible around the edges of the cut. We followed the trail, much overgrown, as far as a big alder slide. Then a dry stream bed led upward to the cliffs. After much scrambling, we got onto the glacier, Mt. Spring Rice above us hidden by clouds, a small unnamed peak below us looking twice its real height. Some step-cutting was necessary to make the col between Spring Rice and Queant and then to our pleasant surprise, a knife-edged snow ridge led up to the top of Queant. The mountain did not look like much from the glacier below, as it is a shoulder, or rather outpost of Spring Rice, but here it was saying with a flare, "I'm a real peak after all." The sun shone down on the Saskatchewan flats but Alexandra and all the high peaks were in the clouds. The easy final slope of Alexandra was visible for a few minutes. The most spectacular peak was Mt. Cockscomb with its snow-crest shining but inaccessible across S. Rice Brook valley. We descended by only a slightly different route. To our joy when we reached the Survey trail at the alder-slide, we found fresh blazes, the windfalls removed and considerable cutting done. Jim had cut out the trail and we followed it directly to a log felled across the stream just above our camp. We had taken seven hours for the ascent, five for the return.

We decided then to back pack a camp into the head of S. Rice Brook to climb Alexandra, which, in spite of its 11,214 ft., we felt could be climbed in poor weather. Going in took three hours but later when there was no cutting to be done, it took but half

this time. It is a lovely valley. We camped just below a fine canyon through which the stream flowed from a high waterfall on the left; above the falls a wide flat alpine valley opens before one. To the right, thick grassy meadows were brilliant with flowers, mostly arnicas and paintbrush. But one enjoyed these beauties only if willing to bushwhack through thick undergrowth, every leaf of which harbored a glistening drop of water, soaking one through.

We climbed Mt. Alexandra. One could barely see Edward, who was leading, through the snow flakes which whirled about us. At the top, we could see where the snow cornice stopped in the mist beyond and we let Chris fall through the snow on each side to make sure we could not get around it or onto rocks. Then "Here we are, let's go down" was all anyone said. I knew the Lyells, Oppy, Farbus and a thousand other peaks were all before us and a tremendous sense of disappointment surged through me. It poured all the way back to a cheerless fly-camp. We packed out of S. Rice Brook the next day.

If it hadn't cleared, I don't know what we would have done. As it was, it rained at supper ten minutes before we left camp for the Bryce bivouac, but we went anyway, choosing for our route the dry creek-bed which the trail crossed a half mile above our camp. It was a good route, saved our getting wet in the underbrush and in one hour and forty-five minutes we were at the bivouac. It was as we had left it, except a mouse had nibbled some of our chocolate. It was a cold night, so cold the men started breakfast about midnight. We left at 2.10 and stumbled after Edward's small flickering candle. We crossed the little creek, went up the moraine and got onto the glacier. The day was clear but it was still very dark. We waited for daylight but it was too cold, so we felt our way on over the ice. When dawn came we were high up on the mountain. Our route lay straight up the S. glacier, twice traversing onto the rocks to the right. Edward's route with Amery was up a long ridge of rotten rock to the W., coming out on the glacier high up near the col. The col, divided by a large gendarme in the center, is a spectacular gateway to the upper névé. We paused there but not for long as the wind blew and it was very cold. It was not quite 7.00. The E. face of Bryce, which we had seen so well from Watchman Peak, towered 1000 ft. above us. The snow was steep but it was in perfect condition, windswept and firm. Chris cut steps straight up to the berg-

schrund, where it was well covered. The slope got steeper as we progressed. When the schrund was passed, we began the traverse along the steep narrow shelf we had spotted from Watchman. Chris cut big steps near the wall of the mountain and we found handholds there as we moved carefully along. The snow was too hard to jab in one's ice-axe but often it could dangle in the crack between the ice and the wall. Soon the couloir came into full view from behind the buttress. It looked steep and forbidding; the few rocks, projecting out of the pure white, were glazed with ice. Chris started chipping off the ice, and preparing a steep but regular staircase to the ridge above. I huddled against the wall, the rope belayed around the axe jammed into the crack between the ice and the wall. Below, our narrow, steep and snowy ledge dropped off to nothingness. Edward and Miss Gardiner were behind, well anchored, and across the valley the peaks surrounding S. Rice Brook stood out clear and beckoning. Chris was now up and out of sight and we followed slowly and carefully. Now we were on the upper S. ridge of Bryce and a glistening highway led to the summit. A movie record was made of the ascent of the last slope. Then Miss Gardiner and I together walked out on the very summit.

Well anchored, we moved out on the cornice as far as we dared. The ridge between Bryce and the central peak to the E. is magnificent. The snow curls over first on one side, then on the other and often is corniced on both sides together. Even as we looked, however, a swift moving cloud had wiped out the S. Rice Brook group and threatened to envelope us. I grabbed the movie and panoramed slowly towards the icefield and Mt. Columbia, the cloud closing like a curtain shutting off the picture. The wind blew and it was bitter cold. We descended to a little outcropping of rock where we reconstructed the cairn and left our names. We found no record but it was too cold to search thoroughly.

The half hour spent on top was all too short for what we wanted to do and see, but too long for freezing hands and feet. We hastily descended, fearing also the snow conditions might be less favorable on the descent. It was only 9 A.M. when we left the summit. At the col, we nibbled chocolate and frozen bannock sandwiches, then proceeded across the glacier below, to the rocky ridge now on our right, which Edward and Amery had used on their ascent. The snow was good at the col, but further down it became soft and sticky, and we started going through to the ice

beneath, so it was pleasant to reach the rocky ridge. Very rotten, in places quite narrow, whole sections of it looked as if they might be pushed over easily. We reached the bivouac exactly twelve hours after we had left it. Packing up the few things left there, we went on to camp. Jim had a grand meal ready for us and we pitched in, but even as we ate, a gentle and familiar patter was heard on the canvas above us. How differently rain sounds after the climb is over!

The next day, we moved camp to the Castleguard Meadows. The whole outfit was together again for the first time since we had left Thompson Pass. We passed right through our old campground there without stopping, and a sorry looking place it was. Our twenty-three horses, grazing there for two weeks, had eaten every blade of grass.

We climbed Mt. Castleguard and it poured all the way home. We had hoped for Mt. Columbia, but the weather was impossible and it seemed foolish to stay on the great divide any longer. So we travelled back towards Lake Louise and put in our last two days climbing from camp on the Mistaya River. The third highest Murchison Tower, 10,100 ft., was a first ascent. We had a beautiful day but as we looked to the N. from the summit, the clouds still hung over all the high peaks of the divide. We had a fine view of Mt. Murchison itself and of the second highest tower, 10,659 ft. The latter is unclimbed and looked difficult. Our last climb was Mt. Chephren, more familiarly known to most of us as just "The Pyramid." We made the summit in another snow storm, an appropriate ending to the rainiest summer in the Canadian Rockies for many a year.

Ascent of Mount Bell

BESTOR ROBINSON

THE summer of 1936 marked an all-time high for population on the Franklin Glacier and its tributaries. Three closely cooperating parties, frequently camping together and always planning together, brought eighteen persons to break the loneliness and solitude of the Mt. Waddington region. From the eastern seaboard there were Elizabeth Woolsey, Allan Wilcox, William House and Fritz Wiessner. Into her own hinterland, Canada sent William Dobson, James Irving, Elliot Henderson and Lawrence Grassi, supported by Don Baker, Ken Austin and Denver Gillan as packers, and Arthur Mayse reporting for the *Vancouver Province*. Sunny California contributed Richard Leonard, Hervey Voge, John Riegelhuth, Ken Adam, Raffi Bedayan and Bestor Robinson, three of them veterans of the 1935 Sierra Club Waddington expedition.

On July 25th, our intermediate base on Dais Glacier had many of the aspects of a Los Angeles real estate boom, so great was the population. Some of the more mercenary minded were preparing to stake out lots and sell pieces of scenery, scenery of incomparable beauty, for we were just emerging from a blizzard that had brought us all down from the high camps and, by liberally plastering the cliffs with snow, had ended for at least three days all possibility of venturing again on steep rock faces.

Behind us were several weeks of active and enjoyable mountaineering. The Canadians had made a first ascent of Mt. Vigilant; the Californians had done the same with Mts. Cavalier and Halberdier. By ascending and descending through an avalanche-raked couloir in comparative safety during the cold of two successive nights and by rock climbing of a high order, Wiessner and House had finally placed man's mark on the S. peak of Mt. Waddington. Some of us had enjoyed two attempts on the same peak by the S. arête, alternating climbing on snow and ice. Although it appeared that the peak could be ascended by this route, it would involve a long rope-down, a ticklish rope traverse and probably the use of pitons for direct aid, which, combined with the length of the climb on the arête, would necessitate a bivouac on the peak.

MT. GEDDES AND TRIBUTARY GLACIERS OF BELL GLACIER

BELL CAMP AT EVENING

Photos, H. Voge

MT. BELL
From Upper Dais Camp on Mt. Waddington

MT. CAVALIER

Photos, H. Voge

The storm from which we were just emerging on Dais Glacier had driven us off the peak and prevented any attempt to complete the route.

And now there was just time enough for another peak. Longingly we had often looked at the great pyramidal bulk of Mt. Bell, which dominated the Coast Range N. of Fury Gap in the same manner that Mt. Waddington dominated it to the S. Hall and Munday had looked at the peak from the top of the Franklin-Klinaklini divide—otherwise it was unreconnoitered as well as unclimbed.

So four of us, Austin, Voge, Bedayan and myself, descended to the broad ice plain formed by the junction of the Dais, Portal and Fury Glaciers, an ice plain which in turn gives birth to the mighty Franklin. The new snow was deep and unpacked. Our light duraluminum snowshoes, weighing less than a pound apiece, fully justified their inclusion in our list of equipment.

Our route lay N. W. up the easy slope of Portal Glacier, almost to the Franklin-Bell Glacier divide, then to the right up a narrow tributary to a sudden drop-off into the Bell Glacier. We were on the summit of the Coast Range. To the N. W. lay Mt. Bell, Mt. Dorothy, Remote Peak and other unnamed and unascended mountains, terminating in the deep gorge of the Klinaklini where it cuts its way through the range. To the E. and S. E. the main crest swept in a huge semicircle past Mt. Chris Spencer and Fury Gap and on to Waddington, Combatant and Tiedeman. Across Bell Glacier a clear but sporty route beckoned us to try Mt. Geddes, but the sun had set and the chill air bid us camp. Here in a huge snow hollow, protected by hundred-foot banks, we pitched two of our four-pound tents, which had proved their worth so many times during winter in the High Sierra Nevada. It was the kind of a campsite one never forgets.

Next morning early we were off. A choice of routes lay before us—either to drop 3000 ft. onto the Bell Glacier and continue on its curving surface to the eastern arête of Mt. Bell, then up a grueling 6000 ft. over rock and ice to its summit; or, on the other hand, to contour across three glaciers and join the E. arête 2000 ft. below the summit. The first alternative was rejected as involving too much work and too little sport.

Contouring the three steep glaciers proved an enjoyable but seemingly unending succession of step cutting, bergschrund jump-

ing, steep traversing and bridge crossing. Then we reached the E. arête. Here was a ridge designed by Nature, while in a humorous mood, to vex mountaineers. From a distance each new obstacle appeared impossible to surmount, but when reached a way led on. Sometimes it was a snow knife-edge so narrow that we kicked steps clear through it; sometimes it was an overhanging ice-cliff; sometimes an apparently bridgeless schrund. Always, however, on close approach there was a way around, over, or through.

Late in the afternoon of July 26th the entire party stood on top admiring the awful drop into Bell Glacier on the E., Dorothy Glacier on the S., while only a short distance to the W., but over 11,000 ft. below, rolled the Klinaklini River.

A council of war brought a unanimous vote in favor of extending the first ascent into a traverse. Then down the S. W. summit slope we slithered, on down through the headwall of a glacial cirque, by way of 2000-ft. couloirs filled by ice and snow. In part it was safe glissading; in part ticklish rope work. We felt we had had a full day of mountaineering when, at 9.15 P.M., we came out on a rock shelf hanging above the Dorothy Glacier. It was time to stop.

Out of Voge's capacious rucksack came our Neoprene-covered bivouac sheet. We picked out the softest rocks, leaned against the wall, pulled the sheet over us, munched a few iron rations and talked of camp, hot meals and warm sleeping bags until we passed into that state of fitful and chilly coma that some mountaineers call sleep.

The following day we found a steep but simple route up the ice-covered headwall of the Dorothy Glacier. We were now back on our old friend the Portal Glacier. It only remained to travel for several hours in a fog, relying, with many doubts, on our compasses for directions, then a short side trip to recover our tents and bags and down the Franklin Glacier to Icefall Point. Here we saw grass and trees, running water and flowers. Even the buzz of the mosquito was welcome. We realized that although snow and ice and rock may have its challenging appeal, man feels at home only among living things.

Two Southern Peaks of New Zealand

KATE GARDINER

WHEN winter winds are sweeping through the leafless trees of New Jersey and the Canadian Rockies are again shrouded in snow, a new summer has begun on the other side of the world and the foothills of the Southern Alps of New Zealand are already white with alpine bowers.

Last December I was fortunate enough to find myself once more in that beautiful region, with the ascents of those two lovely peaks, Mt. Aspiring (9957 ft.) and Mt. Tutoko (9042 ft.), as the main objective of my visit. These rather remote mountains lie in the S. W. part of the South Island near the Cold Lakes. Aspiring is not far from Lake Wanaka, and a beautiful view of the glacier-covered side of Mt. Tutoko is obtained from the head of Milford Sound.

They are surrounded by a good many unclimbed peaks and this district is an especially happy hunting ground for young and energetic guidless climbers who do not mind back-packing and rough country. The peaks may seem low in comparison with some of those in other mountain regions, but both Aspiring and Tutoko are glacier-hung as the snow level in New Zealand is much lower than in Switzerland and one must remember that they have to be climbed almost from sea-level.

These mountains are in rather a rainy part of the country which adds to the difficulty of their ascent. One party some years ago waited three weeks in camp hoping to climb Mt. Aspiring and then had to abandon the project on account of the weather.

Making the Hermitage Mt. Cook my headquarters, I was able to get my two old friends, Frank Alack and Vic Williams, the well-known guides, to climb with me and after ascending the S. peak of Mt. Cook and making some other climbs in that neighborhood, we set off for Pembroke on Lake Wanaka on December 28th, which is nearly a day's motor run through the mountains.

From there the following morning we motored on again for thirty miles to Niger Huts where we were met by Mr. Aspinall, the manager of the Mt. Aspiring sheep station, who had kindly

arranged to come with two horses to help us transport our camping equipment and food up to Shovel Flat, near the head of the west branch of the Matukituki River, beyond which lay Mt. Aspiring itself. This broad grassy valley is very beautiful, with dense forests running up to wild crags on either side over which waterfalls tumble, and beyond one gets glimpses of glaciers and snow peaks.

It took us all day to get up this valley and establish our main camp and the next morning Vic, Frank and I set off for a high camping place at about 5700 ft. We had to make our way through the forest and up steep hillsides to a narrow ledge at the edge of the snowfields below Mt. French, where we pitched a small tent.

On the morning of December 31st we set out before daybreak and when it was still rather dark we reached some very broken ice called the Quarter Deck, where it was awkward to find a way through a maze of seracs and deep crevasses. Then going up over a rock ridge of Mt. French, just as the dawn was breaking, we came down onto the great Bonar Glacier which separated us from our mountain. Aspiring is truly a beautiful sight from this point; as it rises like an ethereal snow-clad Matterhorn from the outspread névé below it.

Traversing the glacier and manipulating a difficult bergschrund at the foot of the mountain, we cut up steep snow slopes to gain the main ridge. We rested a while at a saddle from where the view was superb, Mt. Earnslaw and Mt. Tutoko standing up wonderfully to the S. and a clear view being also obtained of the Mt. Cook group.

The main ridge led on steeply to the summit, which was unfortunately capped by a thick fog. The descent was made by the same route and great care had to be taken because of the state of the snow. We found to our dismay on reaching the Quarter Deck that an ice-bridge, which we had used to cross a deep crevasse in the morning, had given way during the day; but we got over this difficulty by undercutting a rather tottery serac which fell down and made a somewhat fragile bridge. However, we got safely across and soon reached our high camp again.

It had rained slightly during our descent from the peak and we had some showers the following day, as we made our way back to the main camp, but it cleared January 2nd and we all walked out to the junction of the river to stay with Mr. and Mrs. Aspinall,

Photo, K. Gardiner

MT. TUTOKO

Photo, H. S. Hall, Jr.

KEAS NEAR ALMER HUT

Photo, K. Gardiner

MAIN CAMP BELOW MT. ASPIRING

who had very hospitably invited us to their homestead and who gave us a very good time there. We had indeed been fortunate in getting one climb so quickly and in good weather; but the poor guides came in for a real deluge the next day when they went up with the horses to get our belongings from Shovel Flat.

On January 27th, after another spell of climbing around the Hermitage, we set out once more for the S. in order to climb Mt. Tutoko, this time driving on past Pembroke to Queenstown on the shores of Lake Wakatipu. Here we spent the night and took a launch the following morning to Elfin Bay farther up on the other side of the lake, where we found awaiting us Mr. Shaw, another station holder, who had kindly promised to come with us as far as Glacier Creek in Hollyford Valley and to lend us some riding and pack-horses.

It was a three-day ride along rough bush tracks to Lake Hawden and down Hollyford Valley, fording the swift river here and there, and we were delayed two days by bad weather. We took plenty of provisions with us and some guns to shoot game with in case the river rose and we got marooned at Glacier Creek where the packtrain left us for about ten days. However, Mr. Gunn (another station holder) had no difficulty in coming over to get us with the horses at the end of that time, so all was well.

Having found a good camping place on the moss-covered bank of the creek, with thick forest behind and on both sides of us, we soon set up our tents and on February 2nd the guides cut a track through the forest and up the very steep bush-covered mountainsides above camp and taking a small tent with them established another high camp 200 ft. above timber-line and the next day we all scrambled up there, carrying the rest of our equipment and stores with us.

On February 24th we made the ascent of Mt. Tutoko, first traversing a long snow slope above our high camp and then dropping down over a ridge onto the Donne Glacier. This was followed to the névé above it and the main ascent began by way of the N. ridge and face of the mountain which consisted mainly of rock.

The last 500 ft. of the mountain was interesting climbing, comprising a chimney which was badly iced. From the summit we could see the Sutherland Falls, Milford Sound and many other landmarks with the sea beyond.

After some intervening bad weather, when we were driven down to the main camp, we were able to return to our high camp and make the first ascent of an unnamed peak next to Tutoko, which proved a good snow and ice climb.

After making some small ascents in the Milford Sound and Queenstown region we returned to climb again around Mt. Cook, feeling very pleased to have ascended those two far-off southern peaks with so little difficulty and to have seen something of the lovely country surrounding them.

One never will forget the beauty of those wild woodland valleys, with the sparkling rushing rivers running through them, the crimson rata blooms making a wave of flame color on their somber forest-clad sides and here and there up side valleys many unclimbed, snow-clad peaks coming into sight.

Photo, H. S. Hall, Jr.

HEAD OF COPLAND VALLEY

MT. COOK
From Copland Pass

FRANZ JOSEF GLACIER
From Defiance Hut

Photos, H. S. Hall, Jr.

New Zealand Experiences

HENRY S. HALL, JR.

THE Mt. Cook district in the Southern Alps of New Zealand might well be said to resemble closely the mother Alpine range of Europe on a three-fourths scale, just as the Caucasus impresses one as a four-thirds edition of its Alpine prototype. The New Zealand comparison with the Alps does not hold quite as well, below treeline, as the Caucasian, in fact its relation in that respect is far closer, on both sides of the range, to the coastal mountains of British Columbia. Above the vegetation zone there is a similarity of rock structure, mountain type and snow and ice formation between New Zealand Alps, European Alps and the Caucasus, which however the British Columbia Coast mountains hardly share at all.

In New Zealand Alps and Coast Range one finds the dense, luxuriant, temperate rain forest type of vegetation, quite different in actual species of tree and plant life, but remarkably similar in its impenetrability for the mountaineer and climatically. The inland sides of these two ranges are extraordinarily alike, except that the contrast between east and west slopes in New Zealand is even more pronounced, but the total area involved is much less. In both ranges from the high summits there can be seen at a glance the two utterly different physiographic, climatic and vegetational areas. In the European Alps there is no such contrast. In the Caucasus the contrast is very marked, far greater than that of the Alps but less than that of New Zealand. Caucasus and European Alps are strikingly similar as regards vegetation and human settlement.

Except in one or two limited areas the mountain types of the Coast Range do not remind one much of the other three ranges. In New Zealand, Caucasus and Alps the snow fields, condition of snow, hanging and valley glaciers are all of a type which one might call *alpine*. In these respects again there are comparable exceptions in North America, but it is the prevailing type which one is interested in while attempting to show comparisons and contrasts, not the exceptions however notable.

Climbing procedure in the Mt. Cook district because of the relation of hotels, huts and peaks is almost entirely European.

There is one important hotel on the E. side of the range, the Hermitage (2500 ft.), from which six or more good climbing huts are available, and on the W. coast there is the hotel run by the well-known retired guides and pioneer climbers, Alec and Peter Graham, at Waiho (300 ft.), an hour's walk from the Franz Josef Glacier, and another hotel near the almost equally famous Fox Glacier, from both of which huts can also be reached.

Although practically all of the peaks of any importance in the Mt. Cook district have been climbed the thrill of finding new and entirely legitimate routes is by no means fully exhausted. One of the potentially greatest climbs in New Zealand, the main S. ridge of Mt. Cook is still awaiting its conqueror. In this vicinity the range may be crossed between hotels and huts by several high glacier passes and by the traversing of a number of important peaks. The crossing generally takes three days but can be done by fast parties in two days, the distance averaging 30 to 40 miles. The huts vary from 3500 to 6500 ft. above sea-level, the passes from 7000 to 9500 ft. The snow line in midsummer (February) averages about 6000 ft. In February, 1937, there were four snowfalls below 5000 ft. and during one of these storms three or four inches fell around the Hermitage (2500 ft.). The Tasman Glacier, 18 miles long and therefore larger than any in the Alps (the Aletsch being but 15 miles), rises in snowfields over 9000 ft. and ends in a huge stagnant moraine-covered lobe at 2500 ft. On the west coast the 8-mile-long Franz Josef Glacier tumbles in superb icefalls to only 600 ft. above the sea.

In the New Zealand mountains the old adage of "striking quickly to secure the fruits of victory" is very well remembered at all times. If there is any chance of good weather go up to a hut and be prepared—either for a climb or for the famous nor'wester, in which latter case either go down again to the hotel or be ready for a fierce storm of from two days' to a week's duration, following which there can be a brilliant period of days on end. At the huts are generally to be found blankets and often more or less of a stock of food which has, of course, to be paid for and probably supplemented from one's own pack which has been filled at the hotel. At the Hermitage and at Waiho there are stationed several professional climbing guides, mostly capable men, whose charges are reasonable, and who are good companions in the mountains. A visiting climber will often be able if he has been in touch with officers or members of the New Zealand Alpine Club to join

a climbing party, though this is much the same as elsewhere, bearing in mind, however, that New Zealanders are a friendly people who very soon take you at face value.

Away from the Mt. Cook district climbing and conditions of travel in the mountains are much like those prevailing in British Columbia coastal mountains. Horse travel is often possible in the E. valleys. Backpacking is the rule on the short, sharp W. slopes of the range and in certain interior virgin areas. Almost everything in the way of climbing and camping equipment and clothing can be bought in New Zealand, which is a useful thing to know if one must fly, as is soon going to be possible, from the United States in just under and from Europe in just over a week.

The New Zealand Alpine Club, a very live organization of some 300 members, publish an excellent Journal annually, maintains some of the huts, conducts small parties into the mountains, and has been and continues to be chiefly responsible for a large proportion of the new and other important climbs done each year. Its members are to be found in the four chief cities and in fact almost throughout New Zealand but more especially in the South Island. It has been the experience of all visiting climbers that the New Zealand climbers are cordial, friendly and helpful when once they have learned that a kindred spirit is in their midst. In the last few years the club has developed quite a large number of able and competent guideless climbers, some of whom have already shown up very well in comparison with first-rate amateurs in the Alps and elsewhere. Unlike the majority of amateurs in other countries the New Zealander is generally as good on snow and ice as on rock, since there are more difficult snow than rock peaks in his country.

Travel and hotel accommodation in New Zealand is not expensive and is simple but clean and comfortable. There is adequate rail, bus and air transportation. The climbing season is from the middle or end of December to the end of March. In 1937, January saw the best climbing weather.

Landing at Auckland on January 18th, 1937, I went the second day by rail in eight hours to National Park where there is a good new hotel. Mt. Ruapehu (9176 ft.), the highest summit on the North Island, gave me both a fine view of the whole central part of the island including Mt. Egmont, a perfect cylindrical cone 80 miles W., and a terrific sunburn after about six hours on old snow with some wind at the top. Climbers who know the Alps and

other high mountains all agree that sunburn is more acute in New Zealand.

Sleeper to Wellington, where I met Mr. Arthur P. Harper, pioneer of New Zealand mountain climbing and exploration, overnight steamer to Christchurch, rail to Timaru and bus thence brought me to the Hermitage by January 27th. Guide Mick Bowie and I left the next morning for Haast hut (6300 ft.), above Tasman Glacier, not however without a warning from Mick that a nor'wester was brewing. It came: we retreated. Three days later at the kind invitation of Miss Christina Irving who had engaged Mick for two weeks, I found myself scrambling up the steep trail to the same hut, not entirely free from a rucksack load, though Mick's pack was much larger than mine. The view from this hut perched on a ridge above Hochstetter icefall is very fine. In front one has the full length sweep of Tasman Glacier and all the snow basin at its head, rock peaks across it including Malte Brun (10,400 ft.), and a view for miles down the main valley. Behind rises superb Mt. Cook (12,350 ft.) in one direction and in the other Mt. Haidinger, its glacier-clad flanks thousands of feet high frequently swept by booming ice and snow avalanches.

In perfect weather the next day we climbed Mt. Dixon (just over 10,000 ft.) wholly on snow, steepish in places and with a nice little arête near the top. This is a good viewpoint for Cook, Tasman, Haidinger and over to Harper Saddle and the head of Fox Glacier. We basked in the warm sun for over an hour before thinking of the descent, which was accomplished rather cautiously in places, the whole day having been about twelve hours. The next day I stupidly felt rather seedy as we got up on Snow Dome en route for Mt. Lendenfeld adjacent to Tasman. I dropped out and watched the others make a perfect ascent, and was none too pleased with myself later in the day when Mick said upon their return that had we all three made Lendenfeld he would have considered going on to Mt. Tasman (11,400 ft.), often called the most exacting ice climb in New Zealand and at that time in the best condition he had ever seen it.

At the Hermitage there turned up a party of three strenuous young climbers who had driven by night from Dunedin and asked me to join them, but I had in the meantime arranged to cross the range by Copeland Pass with two ladies and their guide to Waiho, and so, luckily as it turned out, declined their kind invitation, because I later heard that bad weather prevented them getting a

Photo, H. S. Hall, Jr.

MILFORD SOUND
From Gertrude Saddle

THE MINARETS

MT. DIXON
From Snow Dome

Photos, H. S. Hall, Jr.

single climb in two weeks. With Miss Scott from Dunedin and Miss Du Beer from London, with the Maori guide, Jack Fluerty, and Colin Pearson, a medical student from Dunedin, after a day in heavy storm at the Hooker hut, I made the crossing, the first day in lovely weather up to the pass, then down among the chamois from 7000 ft. to 1100 ft. in Copeland Valley to a hut with warm sulphur springs for the evening bath; and the next day in cold, driving rain by foot, horseback and car to Waiho, an interesting and varied day nevertheless, including an experience with quicksand in Cooke River when fording on horses.

Five days at Waiho in dubious weather gave me the opportunity for a flight with Captain Hewitt down the W. coast as far as Haast River and Landsborough Valley during a brief interval of fairly good weather. In a few minutes we had reached the divide between Franz Josef and Fox Glaciers which we crossed at 8000 ft. quite near Mts. Cook and Tasman, then diagonally across Copland Valley and towards the coast, getting perfect views all the way of the high peaks, glaciers and deep valleys. In Landsborough Valley, where we landed with some freight, were herds of wild deer competing with domestic cattle for the feed. These, as well as the chamois, of which there are estimated to be several hundred thousand on the Southern Alps—the latter all sprung from four pair sent by Emperor Franz Josef of Austria in 1907—are now being systematically shot off by government "cullers" to keep their numbers in control. Deer and chamois here have no natural enemies. They destroy the vegetation, cut the turf on ridges and slopes, causing landslips, and in general give the visitor from other parts of the world a completely new viewpoint on wild game. Returning we flew low along the coast and saw the few evidences of man there, a whitebait canning plant near the mouth of one stream, a gold dredge working on the beach gravels not over 150 yards from tidewater, and occasional tiny settlements. At Waiho River mouth we turned inland and landed in five minutes at the hotel airfield. Directly behind the hotel rise very abruptly the densely beech forested spurs of the range to over 4000 ft. before their crests level off for the more gradual rise to the higher peaks.

By pre-arrangement Mick Bowie had come across from the Hermitage and was accompanied by L. K. Murray, a school teacher from Oamaru who evidently spent much of his spare time climbing or skiing. Leaving Misses Scott and Du Beer for W. coast climbing, we three started back over the range. Rain drove us

to Defiance hut for the first night, and the next day we went up the Franz Josef to Almer hut. Here keas, the amusing, annoying, entirely absurd green parrots with red underwings so well known to New Zealand climbers, entertained us for the afternoon. All articles up to full-sized blankets laid out on the rocks to dry were menaced. Snowballing had little effect. You could knock a bird right off its feet, and in thirty seconds it came back for more. The hut was full that night, a young honeymoon couple and guide, a Swiss with guide Jack Cox, ourselves, and another party.

In cold just sufficient for a firm crust we set out the next morning for Graham Saddle. It is an easy but beautiful snow walk on this side. Behind us at intervals could be seen the other parties. In a nipping wind we tarried just long enough for photographs on the saddle and continued up the steep snow slopes to Mt. De La Bêche, negotiating one moderately troublesome bergschrund. From the summit we saw the long line of breakers for perhaps 50 miles up and down the W. coast, the entire main crest of the range where not cut off by the higher peaks, and at one time through a slight haze probably the sea to the E. "A view not everyone gets," said Mick. Mt. Malte Brun, considered one of the best rock climbs in New Zealand, stood up boldly across Tasman Glacier, and through the glasses the Malte Brun hut could be seen 6000 ft. below at its base perched on a moraine crest. As complementary climbs we did both the Minarets, all three peaks being just over 10,000 ft., and lunched on the more easterly of the two. Mick pointed out the route followed by D. A. Carty's party in a new traverse of Wilczek Peak and Mt. Elie de Beaumont earlier the same season, a good effort and typical of what can still be done in these mountains.

The descent involved a winding route among the broken névé E. face for the first 4000 ft. and then down a snow gully to the bare surface of Tasman Glacier and scramble up its steep moraine to Malte Brun hut.

After a day of rest in glorious weather (generally a mistake in New Zealand) during which Murray started home, Mick and I started for the climb of Malte Brun in the face of a falling barometer, sultry air and sporadic wind murmurings. The climb, mostly on rock and steep snow or ice gullies, is a good one, not particularly difficult by alpine standards but there is a narrow ridge, the *cheval,* a few hundred feet below the top which gives opportunity for sensational photographs if one is not otherwise occupied. The weather became more threatening as we straddled

cheval ridge. At the summit we had about two minutes to look around before the storm descended, a nor'wester. First Cook and Tasman peaks were cut off. Then the wind began to blow. We started down rapidly. A cool rain, just not freezing, driven by the howling wind was not particularly enjoyable on *cheval* ridge. The rain increased. Once off the rocks in three hours we raced and glissaded down snow-covered glacier slopes, I getting out of control once and doing a triple somersault much to Mick's amusement. At the hut, clothes which were hung to dry had rivulets running from them in no time. The storm, with wind so terrific that pools of water in front of the hut were blown off into the air, gravel rattled onto the corrugated iron roof, and the hut itself strained at its moorings under strong cable supports, continued for thirty-six hours. In a false clearing we retreated to the Hermitage the next day. Mt. Cook, which I had hoped to climb, was now becoming plastered with new snow. Rain began again that night and after three days of it I gave up, and started by bus for the S. end of the island.

At Queenstown by lucky chance I met Miss Gardiner who had had surprising success despite the weather. (See preceding article. —Ed.) At Lake Te Anau the launch schedules were such that I wouldn't have had time for the famous Milford track walk, and so after consultation with the bus driver I went up to the road camp at Homer tunnel, put up there in the original little N. Z. A. C. hut for four nights and did manage in the only few hours of clearing one day to scramble up to Gertrude Saddle (4400 ft.) and look down the amazing valley beyond at a corner of the sea in Milford Sound. During the three days of rain my time was filled interestingly in conversations in their cabins with some of the men working on the tunnel, which is to carry the road eventually under Homer Saddle, thence by a gallery such as that at Axenstein along the vertical cliffs on the farther side and so on down to Milford Sound. The entrance of the tunnel had been driven directly at the base of granite cliffs which are just at an angle to hold falling snow long enough to result in destructive avalanches.

In dubious weather I returned to Te Anau, took bus and train to Dunedin and thence back to Christchurch and by air past the Kaikoura mountains to Wellington. At all these places I had the pleasure of meeting many of the prominent climbers, and left on the *Awatea* for Sydney on March 9th with a very strong feeling that I should some day return to New Zealand.

The Third American Ascent of Mont Blanc

(George W. Heard, Jr.—1855)

The manuscript which follows is the earliest hitherto unpublished account of an American ascent of Mont Blanc. Its author (1837-1905) was, in 1855, the youngest man ever to have attained the summit, and the first American to repeat the feat (1857). (For portrait, certificate and other details see *A. A. J.*, ii, 365 ff.; *A. J., 48,* 142.) Heard was an amateur artist of some ability, and, from the time of his student days at Geneva, made a practice of sketching above the snowline, a series of his drawings being in the possession of the American Alpine Club, one of them being used to illustrate the present narrative. His sketch of the Matterhorn, dated 1856, is almost photographic in accuracy, in this respect antedating Whymper by several years.

We are also fortunate in being able to present a photograph of the climbers in Chamonix at the time of the 1857 ascent, an extremely early date for a paper print, and interesting in showing the equipment used at that period, including the ancient type of ice-axe, with halberd blade, carried by the leading guide. The narrative of the 1857 ascent will be published in a subsequent issue of the Journal.—*Ed.*

My dear parents— Geneva. August 30th, 1855.

As it is a rainy day & I can't go out, I think I may not do better than employ my time in giving you a history of my last week's tour which may interest you to read, & it will moreover do me good by refreshing my recollection of things & places.

On Monday Aug. 13th I left Geneva en route for Chamouni, with Chapman a young Englishman of 17 yrs just from Eton, fearless & always ready to attempt difficult things & therefore a good companion for a dangerous excursion like the ascent of Mt. Blanc. As I have been over this road before & have described it in a former letter, I will simply add that we arrived at 6 o'clk. & took a double room at the Hotel Royale. The next day we had designed to go to the Jardin (about which hereafter) but the weather being extremely clear & fine, we determined to ascend the Brevent, a mountain of 8500 ft. high, lying directly behind Chamouni, & in ascending which good weather is all important. This mountain commands a view of the entire chain of Mt. Blanc from one end to the other, & being directly before the "monarch" himself, you can see everything on it with great distinctness. When

THE EARLIEST PHOTOGRAPH OF AMERICAN CLIMBERS

Mont Blanc, Sept. 4-5, 1857. George Heard (1837-75) and Augustine Heard (1827-1905). The guides include Pierre Auguste Frasserand, Michael Paccard, Julien Simond, Jean Couttet, François Couttet, Jean Michel Simond, Joseph Paccard, Alphonse Devouassoud, Auguste Devouassoud. Note ancient form of axe held by third figure from left.

ACCIDENT FROM GLACIER WALKING

From a crayon drawing by George W. Heard, one of a series depicting his ascent of Mont Blanc in 1855

you are at Chamouni the summit of Mt. Blanc is so distant that you cannot realise the immense height of it; but when you are on top of the Brevent & see the village far down below you, & then look up at Calotte of Mt. Blanc, almost 8000 ft. perpendicularly higher than the spot whereon you stand, you begin to get some idea of the tremendous size of these mountains: the proximity of the Brevent to the mass of Mt. Blanc is so great that every peak & glacier can be distinguished with the utmost clearness, & also every pasture & chalet (chalets are the cottages & cabins of the mountain peasants & shepherds) on the mountain side, which lies between the dark pine forests below, & the eternal snow above. After enjoying the view here for some time, we descended about a third of the way and then crossed over to a place called Flegere, a spot on the same mountain noted for its fine views. It is 4 or 5 miles from the place where we left the regular path; the way we took was not the usual track, & we were obliged to pick our way over loose stones, through bushes & over little torrents that come rushing down from the heights above, occasioned by the melting of the snow & ice on the summit. At last we arrived there & dined. From no point near Chamouni are the remarkable groups of Aiguilles so well seen as from this, while at the same time you have a better view of the Mer de Glace for 6 miles or more up the valley in the mountains; but such is the vast size of the objects around that the distance is very desceptive & you always underestimate it.

From the Flegere we descended to the road & ascended on the Mt. Blanc side to the Chapeau, as it is called, a spot visited simply for the sake of seeing the Mer de Glace where it becomes the Glacier du Bois, which suddenly descends to the plain, from which cause the glacier breaks up into pyramids & obelisks of the most fantastic appearance.

Some of these obelisks are eighty or ninety feet high, clear and of a deep blue color. Here you frequently see avalanches & the ice crags, no longer able to support their vast weight, being undermined & worn away by the streams which underdrain the glacier, fall over with a frightful crash. Leaving the chapeau, we continued up the side of the Mer de Glace over the confused debris of rocks & stones brought down by the glacier from the surrounding mountains. We walked here about 3 miles & then crossed the Mer de Glace without accident & arrived at Montenvert which I described in the letter I wrote you immediately after returning

from my trip with Mons. Briquet.[1] Here we slept during the night. Now this days work is not inferior, I think, to any we did. It was our *first days* walk, & I had had a complaint which sometimes troubles me, & therefore was not quite so robust as usual: the guides told us that it was never done except by the best walkers, & was *upwards* of *40 miles,* rather beating the walk I took to Salem & back with E. C. a few days before I left home, don't it?

At the Montenvert we found a Frenchman & his lady who were going to ascend to the Jardin the next day. After supper we, guides & all, went to another house near by where there was an immense open fireplace & a merry great fire blazing cheerfully, & gladdening the hearts of all who saw it. It was quite cold, albeit in the middle of August, when you were probably wiping your faces & drinking ice water, we found this fire extremely comfortable. Here we remained an hour or two, talking in French & speculating on the weather we should have the next day & listening to the stories & adventures of the guides. The Frenchman's wife was very amusing & droll, & a very pleasant companion—she took a cigar with her husband & smoked as though she had been long accustomed to the practise, but to C. & myself the sight was novel & singular.

The next morning we started at half past 6, to penetrate somewhat the heart of these enormous mountains, to witness scenes of the most savage wildness & solitude, which forever reign there: some parts of the ascent are exceedingly difficult & dangerous.

In the midst of the snow, ice & huge rocks is a green island of grass & small shrubs, an oasis in a desert of snow & ice, which in August is covered with beautiful verdure & flowers:—this spot is a delightful one, surrounded as it is with every thing that is barren, frigid & unfruitful. It was here while lying on the soft grass that we first thought of ascending Mt. Blanc, the summit of which we could clearly see & which was as bright as silver. The idea seemed to have been suggested to both our minds at the same time, for when I said, let's ascend Mt. Blanc, the instantaneous answer was —"agreed."

The matter being settled, we descended at once to Chamouni. Now I must make a short digression. When I was at this place before with Mons. Briquet, I made the acquaintance of a man by

[1] Possibly the M. Briquet who, with M. Maquelin, ascended Mont Blanc from Courmayeur, July 18th, 1863.

the name of Balmat,[2] nephew of Jacques Balmat who first ascended Mt. Blanc in 1786: he had a son in America, & learning that I was an American he became interested & we had a very long conversation about the States, his son there, Mt. Blanc, &c. When I left him he told me that whenever I was at Chamouni I must come & see him, & that if he could render me any assistance at any time, he should be very happy to do so: formerly he was quite a guide himself & he accompanied Prof. Forbes in all of his excursions, but meeting with an accident he gave up the business. I mention this because he was of great service to us. I went to see Mons. Balmat & told him our intention, on our arrival in Chamouni at this time; he received me very kindly & advised us in what to do & what to take, & did every thing for us in his power: he selected & engaged our guides, & consulted with Mons. Couttet & Cachat,[2a] two of the most experienced; and if one had been a year in preparing, we could not have had things better arranged than we did under his direction during the evening previous to our starting: as you may well imagine the friendship & kind offices of a man like Balmat were not to be slighted, & I was incessantly congratulating myself in having been so fortunate in making his acquaintance: he had been four times to the summit of Mont Blanc, & was familiar with the most dangerous passes in the Alps.

Owing to my excitement & thinking of the scenes that would commence with the following day, I slept but little that night. We got up at 6 o'clk, had a fine breakfast & went & found that Mons. Balmat had everything ready; as it is hard work to eat much when one is at a great elevation in the mountains, I took the precaution to make a hearty breakfast. All things being ready we started at 8 o'clock Thursday morning Aug. 16 & moved out of Chamouni amidst the shouts & applause of the spectators, who had assembled to witness the departure of our caravan, which consisted of Chapman & myself, besides a chief guide, 8 guides, four each of us, 2 volunteer guides, & 8 porters, each guide having a porter as far as the Grand Mulets, as it is called, about 9000 ft. high, making in all 21 persons. It must be confessed that with our ropes, ice axes, alpenstocks &c., &c., we made quite a formidable appear-

[2] Auguste Balmat (d. 1862). Not only had he assisted Prof. Forbes and led Alfred Wills on the first ascent of the Hasle-Jungfrau (Wetterhorn) in 1854, but also acted as escort to Empress Eugénie when she visited the Mer de Glace in 1860. For portrait, see Whymper's *Guide to Chamonix*.

[2a] Probably Joseph-Marie Couttet and Cachat-le-Géant.

ance, while our porters were loaded with sacks of bread & cheese, cold meats, kegs of drinkables, tea, coffee, prunes, wax candles, & a multitude of little necessary articles crowded into knapsacks; all looked as if the excursion was not an every day one, but something more serious & dangerous that we were commencing. Each guide has his partner as far as the resting place for the night, to carry luggage, in order to preserve his strength as much as possible for the hard work of the next day, so we made a pretty good sized company for two such youngsters as we were.

We wound along through the meadows at the base of a mountain until just to the left of the little village of Bosson, when we commenced an ascent. It led at first up thro' a gloomy forest of pines, & emerging at length from this we found ourselves directly under the base of the immense Aiguille du Midi (about 13,000 ft. high) when the ascent begins to be excessively steep and laborious. Here we crossed the glacier de Boison at the junction of another glacier called the glacier de Taconey. The first two or three hours climb altho' very steep has nothing remarkable in it, except you notice your ascent by the decreasing growth of vegetation. You leave the little hamlet of Boison with the singing of birds & the hum of insects in your ears, the air around being filled with the odor of the hay & flowers: as you gradually ascend, these things, one after another, all disappear: the plants grow more dwarfish, the pines more stunted, & the whole aspect of nature more sterile, until there is nothing before you but naked rocks & snow & ice, except here & there a tuft of grass or moss shows itself between the rocks, while higher up the arctic lichen is the only thing of vegetation to rest the eyes upon, and all around is a dead silence.

This is a region of complete desolation; no animal intrudes upon it, & while a chance insect may sometimes be seen, only the scantiest lichens appear on the rocks around. After about three hours climbing, we arrived at what is called the Pierre à l'Echelle, an immense rock which in some former period in the world's history had probably been detached from the mountain above. We are now 4000 ft. above Chamouni. Here we remained to dine & rest & then got ready for the more serious & difficult business. The *Moraine* or outside of the Glacier du Bosson must now be crossed before fairly entering upon the snow & ice of Mt. Blanc amidst which we must remain for so many hours. The Moraine is formed as follows: the glacier is continually moving onwards & its

edges are constantly rubbing against the sides of the mountain, and by the destructive agency of freezing & thawing, it is always detaching stones & dirt & often immense rocks, some weighing hundreds of tons which falling on it are carried along at the same time; this confused mass of ice & rubbish, increasing from year to year forms an uninterrupted line from top to bottom. Crossing this moraine is a work of some difficulty, & called for the best use of ones eyes, hands limbs & feet; a careless step or slip would probably be attended with some serious injury: as soon as you get over this, you are on the Glacier itself, & nothing is to be seen around you but snow & ice. At first we got along very well, but as we advanced, the crevasses became wider, more irregular & difficult to cross. The glare of the sun from reflection was terrible, & the heat was most oppressive. Most all the party had recourse to green veils & green spectacles to defend the face & eyes. I tried them at first, but gave them up, preferring injury to my complexion rather than to pitch unwillingly into a crevasse!

Here some of the crevasses were very uninviting & require a good deal of nerve to cross. I will try to describe one of the worst we have to encounter, tho' I am well aware that no description that I can give will convey a correct idea of it. Its general width was about 15 or 16 ft., I should think, in the centre of it there shot up a pyramid of ice about 3 feet wide on the top (see illustration). It was necessary to jump on top of the pillar, & from that across to the opposite side. The danger was you might jump too far, in which case you would fall into the hole beyond, or not far enough, in which event it would be equally disastrous. To make it more fearful you could hear the streams of water which underdrain the glacier, splashing along, & sounding like the slight muttering of distant thunder in the recesses below, all of which gave you a timely intimation of what would become of you if you fell. I must say that I felt very nervous at this place, & I had strong doubts as to the legitimacy of our present adventure, but as I have too much of the *"mutare vel timere sperno"* feeling about me to retreat, I determined to try it at any rate.

I struck exactly in the centre of the column of ice, & without daring to stop, I followed it up with another tremendous leap, which would have done credit to a harlequin, I fancy, and landed safely on the other side.

I think this was the most dangerous place we met with, because every thing depended solely on yourself, & no one could help you at all, as there was only room enough for *one* on top of the pyramid. I doubt if I could do it again.

A short time after this we had to pass a place where the position of the ice was something of this form. An immense crag shot up some 20 or 30 ft. over your head & overhanging a crevasse more than one hundred feet deep. There was only room enough to pass by placing one foot precisely before the other, & you were obliged to bend over the crevasse a little to avoid striking your shoulders against the ice above. As I am not subject to vertigo or dizziness, I could not refrain from stopping when half way over, to look down into the crevasse under my feet. You could see the dark chasms extending far down & away under the ice where you are standing, with immense ice caverns & pillars covered with frost & icicles, dark blue as far as the light can penetrate the ice, shadowing off into boundless gloom where it cannot.

Generally the crevasses are not very unlike. Over some of them we found natural bridges of snow & ice, that assisted us in crossing very much. The chief guide could go ahead, & with pole & ice-ax test their strength, & advancing cautiously, never leaving one foothold until sure of the next, & when once across assisting the one behind, & so on until all were over. But it was somewhat startling to find the bridge sometimes give way under a vigorous punch of the pole, & a few seconds after hear the broken pieces of ice crash against the sides & splash into the streams below: the only way one had of judging of the depth, by the interval which elapsed between the crash & striking the water, if indeed you could hear it at all!

At 2½ P.M. we arrived at the Grand Mulets. This spot is not usually reached until 5 o'clk., but our guides say that we walk much faster than parties commonly do. Chapman explains it by saying that one of us being an American goes ahead & does things quicker than other folks, while the other being an Englishman, would not be beat by a Yankee! this is logical isn't it?

The chain of rocks called the Grand Mulets is about 6000 ft. perpendicularly lower than the summit of Mt. Blanc: the guides say that the name is derived from a fancied resemblance at a little distance, of one end of the chain to a mule's head & of the other to his tail, but I could not perceive the likeness. As soon as we

arrived here we gave our porters some refreshment & sent them back to Chamouni, & then began to get ready for the night. Formerly there was no shelter at the Mulets, & you were obliged to encamp in the open air; but a few years since a kind of hut was built for the accommodation of those who ascend Mont Blanc. It was made at Chamouni, then taken to pieces, every board numbered, and then 150 guides carried up a board at a time on their shoulders & put it up. It is about 20 ft. long & 8 ft. wide, with a board running between the end posts for a table, & another round the sides for seats; it has also a small stove & iron kettle: for fuel you must carry up your wood, & for water, melt the snow & ice.

Our guides immediately got a fire going & a kettle of snow melting to make tea & coffee. I went outside & getting on top of one of the crags where it was smooth, I endeavoured to get asleep, & actually succeeded in having a short nap. The rock was warm from the rays of the sun, & so I was quite comfortable.

Soon however I went inside & found the party as merry as crickets & stowing away supper in a manner marvellous to behold. Owing to a little trouble to which I have before alluded, I ate but very little, & drank a bowl of tea & afterward some wine of the country, unlike ours, but weak somewhat resembling claret. Here we were 10,000 ft. high having a jolly time; our guides could sing capitally & all were in fine spirits.

After a while I went out to see the sunset & close of the day, which was indescribably beautiful. I lay outside in a cranny of the rocks, with a big coat over me, for more than an hour. We had day light long after every thing was dim & dusky in the twilight in the valley below: we could see it mount up gradually till at last it left *us*. The dim twilight seemed to bring the gigantic mountains nearer around you, & increase their tremendous size, while the dead silence of the scene rendered the dreary solitude much more impressive & awful, silence broken only by some laugh inside the hut, the ear could catch nothing save the resounding crash of some toppling ice crag as it fell on the glacier we had just crossed, or the dull roll of some unseen avalanche.

As I lay here my thoughts ran homeward across the Atlantic, & I wondered what you were doing there; familiar faces seemed to be looking down at me out of the sky. It seemed as if I could see father reading the evening paper & mother sitting on the sofa, knitting and every now & then stopping to think of her chickens

so far away from the maternal wings, & I started when I thought where the youngest of the brood was at the moment, 9 to 10,000 ft. higher in the air than you were, & several thousand miles away in a foreign country. I was just thinking of uncle Aug. sitting in the little chair before the fire "toasting" his feet, & alternately raising one on top of the other, as he found the fire too hot, while every now and then his head falling back with a short jerk in a quiet snooze, when my reveries were cut short by a guide, who told me I must come inside & get some sleep.

The guides here are omnipotent, & I was obliged to comply. Chapman was asleep already on the floor with a knapsack under his head, and placing myself at his side I succeeded in dropping off, & was soon wandering in the "land of dreams, less dreamless than the reality." About 11½ o'clock P.M. I awoke thinking an avalanche was coming down, but it was "but the wind" blowing with regular Alpine freedom, & making noise enough to frighten a caravan. It was our intention to have started at midnight from the Grand Mulets, but the wind made this too dangerous, so we were obliged to wait until 2½ A.M. when there was a lull in the wind & enabled us to get under weigh. I got up & found every thing ready, & all were eating as much as they could; the guides pressing me to eat, I succeeded in swallowing the wing of a chicken & drank some tea.

Every thing was now left at the Grand Mulets, not absolutely necessary. I obeyed gladly the order to increase my clothing: I put on three pairs of flannel drawers, & two thick flannel shirts, a heavy pair of pants & a pair of thick gaiters, coming up from the feet to the knees, a big pair of fur gloves on my hands, a Scotch cap on my head, a thick pair of shoes, the soals of which were fitted with nails to hang on the ice; thus you have my rig for the remainder of the ascent.

Well at 2½ o'clock Friday morning we started from the Grand Mulets all tied together—13 of us with a lantern directly in front of Chapman & myself carried by a guide just ahead of us.

Our order in the march was as follows. First went the chief guide, then directly behind him came the next best & strongest guide, then myself and four guides after me, then came Chapman & three behind him; the best & most powerful guides being always in front & rear of Chapman & myself: we were all tied together, as intervals of two or three yards between each individual.

Of the first part of our ascent there is little to be said; we skirted along the immense fields of snow that were too steep & difficult to mount straight, walking slowly & with great attention to our feet; sometimes we had enormous crevasses near, on one side & deep precipices on the other, either of which awful enough to make one shudder to look down into them. In case any one makes a mis-step or slips, every body stops with their alpenstocks firmly fixed in the snow, so that by their combined weight they can hold him. The Alpenstock is a staff 6 ft. long with an iron spike on one end, & usually some little ornament at the other. Walking on & toiling up these eternal mountains, I did not give much attention to views, my serious & undivided care was given to the observation of my predecessor's heels, & I was completely absorbed in the steady & sole purpose of placing my feet in the holes just vacated by his. On we struggled & toiled nearly up to our knees sometimes in loose powdery snow, & at others crossing places where your foot made no more impression than it would on stone, and the wind blowing so violently that it was difficult to withstand its force. Every now & then we came to immense crevasses, & were obliged to find a passage, sometimes by natural bridges of snow & ice & at others by leaping; the guides ahead giving a great pull the moment you jumped, thereby assisting you to clear them. But the principal crevasses start from a part of Mt. Blanc called the Dôme du Gôuter, & thence yawn open in front of the prominent resting places; there are three of them, called the Grand Plateau, the petite plateau, & another after mounting the Mer de Côte about which hereafter. These plateaus are huge basins where the snow pours down from the mountains, fills & overflows. These crevasses are crossed in the same way as the others, except the one in front of the Grand Plateau: this was a fearful one. The guides wandered about in search of a passage, now thinking that they had found one & then finding it was impracticable.; they had a consultation, & we decided to try the passage by a narrow bridge of snow a foot or 14 inches wide at most, & about 10 to 12 ft. long. In the dim light of the morning it was impossible to see the depth of the gulf, tho' when we returned we had a good opportunity to do so.

The chief guide went forward cautiously, the rest holding back firmly to check him with the rope in case he fell. What rendered the moment more full of anxiety was, that if we could not pass by this place, we should have been obliged probably to return, as

it would have been impossible to remain there until daylight should come to aid us in finding a better passage, on account of the cold which now was excessive. At last he got over safe, & then the next guide followed, & I him & so on until all were over, when the chief guide again pushed onward.

As soon as you cross this crevasse there comes a hard scramble up the face of a precipice, and the grand plateau is gained: in going up this precipice you have the certainty of falling into this crevasse in case you slip. Before you reach this place you begin to be affected by an awful thirst, & here travellers usually experience difficulty of breathing & other troubles from the rarification of the air. You are now about 14,000 ft. high. For a long time my mouth was excessively parched; at the petite plateau we stopped a few minutes & I moistened my mouth with a little tea. Oh what a drink that was: spirits & wine tasted like fire, but this miserable cold tea was worth its weight in gold. We rested at the grand plateau about 10 minutes; I was obliged to keep moving about all the time to keep warm, & to work my feet inside my shoes continually to keep them from freezing. Here we opened a bottle of artificial lemonade to drink—and wasn't it good? It was at this place that one of the guides began to be sick & complain a good deal; he begged lustily for two minutes of sleep, which of course were denied him, for if he once got asleep, he would never wake again, but freeze to death. We started again & crossed the grand plateau which is about 3 miles in length. On its surface are some very wide & difficult crevasse, but it is quite level & that is very important: and altho' quite easy of transit, yet it is one of the most dangerous parts of the ascent, on account of its crevasses being partially covered with snow, and you might pitch into them unawares. However, we got along very well & without any accident. The mountains close around it in a sort of semi-circle and launch their avalanches into it continually. All along on the right side of the valley enormous masses of ice leaned out from over the precipices, with long fingers of icicles & huge cornices of snow threatening to fall every instant, & hanging in such nice balances, it is said, that the "disturbing vibrations of a whisper might bring them down."

It was here that the fearful accident happened in 1820 when three guides were overwhelmed by one of these avalanches falling & hurling them into abysses, never more to be heard from. You

may believe that *we* did not make much noise as we passed under them.

To show you how much two of our guides, who were esteemed very skilful, knew I have to mention a fact. At this point in the grand plateau there are two ways by which the summit of Mt. Blanc may be reached, one much shorter than the other, & much more dangerous; this one leads to the right. On arriving at the place where the way divides, the guides consulted on the choice to be made: they concluded to take the left, as there was *too much danger of avalanches by the right. When we returned we saw that there had been two large ones since we passed them in the morning, and had we taken that rout, probably the noise we should have made in passing under them, would have brought them down on our heads;* so much for having good guides.

Of the rest of our ascent the worst part is the terrible Mur de la Côte. It is a precipice of ice excessively steep, and you are obliged to cut your steps up the whole of it, one notch for your hand & another for your foot, and slow tough & dangerous work was the ascent. The wind too blew extremely strong & was so piercingly cold, it went thro' my flannel clothing as if it were paper, and was so violent that every now & then we had to stop, & then move on in the lulls, while it seemed as if it would take you off your feet, & the little hard granulated particles of snow, more like hail than anything else, peppered me in the face till it felt as if it was full of needles.

I began to suffer a good deal from the rarefaction of the air here; my mouth seemed as if it was full of sand, and my tongue was very much parched & dry. My head also was very much affected, feeling as if there was a cord drawn very tightly around it, with knots cutting into my temples & it ached intensely, & besides all this there was a sensation of dryness perfectly indescribable. But I was determined to reach the summit or die in the attempt. Here the guide, who had begun to complain before, gave out & was completely done up; I did not see him again until we got down to the Grand Mulets. At last we arrived at the top of this place & got a moments rest, but no sleep, which seemed to be something worth selling a birth right for.

The guides would not allow it, & would shake you & do all sorts of things to keep you awake: I took pieces of snow and rubbed my eyes to keep them open, & found it served better than any

thing else. Our chief allowed us to rest here but a few minutes, and in fact as soon as we could get breath we were anxious to move on again, as it was excessively cold, & the wind seemed to go through you like a knife.

And now for the calotte of Mt. Blanc. "His great white glistening dome." I believed we should be successful & my spirits rose accordingly: but this last climb we were to have was more dreadful than any that we had had before. There was nearly a thousand feet in height to accomplish, and where every foot-step must be cut in the ice, one notch for each hand & one for each foot, the labor was very severe. A single misstep on the "glistening dome" would have hurried you to inevitable as well as invisible destruction. It was so steep that the guide ahead of me had his foot on a level with my head, & we could not take more than eight or ten steps without stopping to get breath. It was precisely the same thing as when to have been running *very fast* & hard, & then stop; you know how difficult it is to breathe fast enough. I thought I never should get air enough to supply my lungs, and I could almost *hear* my heart beat as it struck against the side of my chest, as with the force of a trip-hammer, and my head ached as if it would split. I have been told since, that I was in great danger of breaking a blood vessel under such circumstances.

It seems to me that I must have slept in going up the last few minutes, for I recollect perfectly looking up to the top which was some way above me, & I don't remember any thing more till the chief guide seized me by the hand with, "Courage my friend, we are at the summit of Mont Blanc!" and I looked up, & the next moment I stood on the "stainless summit of Europe" and threw my puny shadow on the very crown of the "Monarch of mountains," the only American,[3] it is said, & the youngest man who had ever been there except my companion, he being seventeen & I eighteen years old.

But I must confess that when I first reached the top I was not in much of a mood for sentimentalising. I could scarcely breathe. I threw myself down on the snow & with my head resting on my hands between my kness & almost gasping for air, and I can't say that the rest were in a better condition, all being in about the same

[3] Heard was unaware of the American ascents by Howard and Van Rensselaer in 1819, and by Talbot in 1854, but is correct in stating that he was the youngest person to reach the summit.

state. As for Chapman, during our ascent of the Calotte, he had to be assisted & lifted along. However in ten minutes we were both of us all right, and having recovered my breath I was no more tired than when I left the Grand Mulets—I mean I was not leg weary at all, but had a general feeling of lassitude. I can only explain it by my being so much excited that it took away all sense of fatigue.

The top may be 300 ft. long & 150 ft. wide; but the ridge itself instead of being round, is as sharp as the back of a horse. On the north side, towards Switzerland, the air was intensely cold, & the wind was so strong that we could scarcely stand against it, while on the other side, towards Italy, 20 ft. below the ridge, the weather was warm and comfortable. Well, here we ensconced ourselves, and the guides got out our refreshments. We had a bottle of champagne to drink Mt. Blanc's health & our own too: as soon as we cut the wire that held the cork in, the cork, without waiting for the strings to be cut, started off without ceremony in a bee line for the higher regions, & for aught I know, is going yet, for I never saw it come down again,

We left the Grand Mulets at 2½ A.M. and at 20 minutes after 9 A.M. we stood on the summit, thus taking but seven hours for making the ascension from the G. Mulets: this is better time than has usually been made by other excursionists. We stayed on the top 30 to 40 minutes, but from very inconvenience we might have tarried longer.

There was not a cloud in the sky as "big as a man's hand," & the atmosphere was perfectly clear—the guides said we were remarkably fortunate, & that we might have made the ascent an hundred times without such success as we had in every respect, and as to the view from the summit, no words or description can convey any idea of it. "It was worth a life to see." That which most impressed me was the awful dead silence all around. The air was so rare & afforded so little resistance that when you spoke, your voice sounded as weak as a child's.

The sky was all *black:*—we had approached, as it seemed to me, so near the outside of atmosphere that envelopes the globe, that we could see through the remainder into the black limitless void beyond. The sky was cloudless but ebon black, & I was very sure that I could see the stars shining in it, but I attributed this to the affects of fatigue in my head, but since my return, I have seen some

account of another party who observed the same thing, so *I* am quite sure *I* saw them. You can't imagine what my feelings & impressions were as I stood on this spot. Almost the first thing I thought of as I reached the summit was how little you at home would imagine where not *on* but *above* the earth, your youngest boy was! How often from Geneva, 60 miles distant, had I looked at this "vague misty, spiritlike shape of lightness far away," little thinking I should ever stand there. But I had toiled & toiled in light & darkness by menacing rocks, over fearful crevasses, beneath overhanging precipices, and avalanches, along fields of snow & up walls of ice & at last I stood in triumph on the summit itself of Mt. Blanc! the toil forgotten, but the victory never will be.

I thought of Jacques Balmat, the first man who had ever ascended it, & what must have been *his* feelings as he stood *alone* on this unearthly spot, on June 9th 1786,[4] kept up by the brave heart within him, & with the consciousness that he was the first of men who had dared to defy the tempests & dangers, & mark out the route to the summit of Mt. Blanc amidst these terrible & unexplored regions of snow & ice. When I see now from Geneva, "high over the gigantic Mountain Wall of Savoy to the south, & behind which peak after peak seem to pierce the sky & prop up the heavens—beyond & above all these, a spirit like shape of dazzling white—mystic & wonderful, brighter than the brightest cloud, and though seemingly suspended high in air, perfectly motionless," when I see this, I can scarcely believe that I have actually been there & stood on the silvery summit of "Europe's peerless peak." It seems more like a dream, & yet we found the way thither any thing but a dream.

It was curious to look down on the Dôme du Gôute far below us—the dome which from the height & advanced position seems from Chamouni to be the highest in the chain & towering above the calotte of Mt. Blanc: as to the Brevent of which I spoke in the early part of this letter, it looked like a mere ploughed ridge.

Away to the East stretched a succession of aiguilles & domes in countless numbers. In our immediate vicinity were the Aiguilles du Midi, Blatiere, the Grand Jorasses, the Charmoz, & across the Mer de Glace, the magnificent Aiguille Verte, fenced round with all its inferior needles, but none of which aspired to the height of

[4] The first ascent was made with Dr. Paccard, August 8th, 1786.

Mt. Blanc. From these succeeded domes & spires in an almost unbroken line till they ended in the gigantic pyramid of the Matter-Horn, and Monte Rosa with her three peaks but a few hundred feet lower than Mt. Blanc.

To the North West, the Lake of Geneva showed itself, shining between the mountains, & far beyond, just on the horison, were the Jura mountains & the numerous hills of France. Just think what a stretch of vision! looking one way to see distinctly the country near Basle, then turning round to see as distinctly the blue plains of Alexandria & Marengo, & nearer than either the dark valleys & pastures of Aosta. I tried with all my power to see the Mediterranean, but could not do it, tho' one of the guides said he could. I have no doubt that the ray of vision extends *over* the M. but the Maritime Alps intervene to hide that which would otherwise be visible.[5] But I can give no idea of the view and I may as well stop at once. Not more than twenty four or six hours ago, our gaze was simply round the rocky walls of Chamouni—now we had a "comprehensive view" of Switzerland, parts of France, Lombardy & Piedmont, and were looking down from our snowy eminence into Italy the land of the "sunny vine." After another long, lingering look from this mountain point upon the wonderful landscape around & beneath, we began our descent.

Many places require as much, if not more care in descending than ascending, but as a general thing, we accomplished in minutes what required hours before. It was difficult & dangerous in some places, where it was ice & no footholds, and very amusing in others, where the snow was soft, and with our alpenstocks behind us, as rudders, we would shoot down long descents with tremendous speed.

Then, sometimes the whole thirteen of us, all tied together, *sitting* down in the snow, would get under way, setting up a shout, would shoot down hundreds of yards like a steam engine: there was one place which we were an hour & half in ascending that occupied but five minutes to go down. It almost took my breath away to go so fast, but it was splendid as you can imagine. At length we arrived at the Grand Mulets three hours after leaving the summit, where we stopped to rest & get some refreshment. We remained here about an hour, & then collecting everything we had left in the

[5] Capt. Undrell had reached a similar conclusion in 1819.

morning, we recommenced our descent; we arrived at the Cascade des Pelerines, at the base of the mountain near the place where we began our ascent, and rested another hour. After this we walked into Chamouni about 6 in the evening as safe & sound as when we started. The people fired a salute of 12 guns, & all hands turned out to see us. We were the lions of Chamouni that night.

Two of our guides were so exhausted that they were unable to reach the summit, & one of them complained bitterly the next day of the effects of his exertions: this was one of the volunteers whom I forgot to mention before: he gave out at the back of the Calotte of Mt. Blanc, & we picked him up on our return. We had a good night's rest and the next morning I felt as well as I ever did, & have not experienced the slightest ill effects of the excursion.

We spent the day in looking round the village, collecting our bills & in settling the affairs of the trip. In the evening we gave our guides a dinner, as is customary, and a grand one it was: the keeper of the hotel was so much pleased that he gave each guide a bottle of the best Burgundy. We invited several to dine with us, & of course Mons. Balmat;—we were a merry set, I don't mean we drank so much wine as to make us so, which was not true, but we had a real good-natured festivity. There was a French gentleman at Chamouni, who was engaged in some scientific investigations among the mountains, who has been very kind to us before we started, & got us several little things. We invited him also. He came & we found him a very agreeable companion: to our surprise we learned afterwards that he was the Duke de Brabant,[6] eldest son of the King of Belgium & heir apparent to the throne. After dinner the chief magistrate of the place (here calles syndic) came & took wine with us.

Some persons, interested in the occasion, brought a cannon near the hotel & fired it frequently during dinner & so we ate amidst what a Fourth of July orator would call, the "thunder of the artillery & the applause of the surrounding spectators!"

You have now a long account of my ascent of Mt. Blanc, & you may get from it a general idea of the toils & perils, as well as the pleasures & gratifications attendant upon it. I am aware that you may be anxious for my safety if I continue to run such risks, & so to put you at your ease I will say, that now I am perfectly content with

[6] Duke of Brabant (1835-1909), became Leopold II in 1865.

the climbing I have had, & shall be careful in future to avoid such dangers. I have returned to Geneva & am hard at work again at my studies, and so ends the history of this (to me) eventful week.

Yours as ever

GEO. W. HEARD, JR.

Mt. Blanc is 14,760 ft. French, or 16,092 feet English in height.

When a person ascends Mt. Blanc it is customary to give him a certificate that he has done so, signed by the guides & countersigned by the syndic, or head man of the place, drawn up by the Town clerk. The following is a literal translation from the French of the one I received:

We the undersigned, all guides of Chamouni, certify & attest, to all whom it may concern, that on the 17th day of August 1855, we have accompanied Monsieur Geo. W. Heard Jr. of Boston U. S. a young man of 18 years of age & Monsieur K. A. Chapman, Englishman of 17 years of age, in making the ascent of Mt. Blanc.

That these gentlemen without having experienced the least difficulty, whether on account of the rarefaction of the air, or on account of the cold, which was very intense, have attained the summit of this giant of the Alps, also all the caravan at nine o'clk & twenty minutes A.M. having only taken seven hours for making the ascent from the station of the Grand Mulets to the very summit.

The undersigned make it their duty to attest that it is the first time it has been done with success by persons of their age.

At 6 o'clk. in the evening of the same day all the caravan made their return to Chamouni safe & sound without having experienced the least accident.

In witness whereof we have signed our names.

Coutet Jean	Couttet Solomon
Couttet Simon	Charles Mich. David
Cachat Gachiere	Pierre Simon
Frierre Michael	Chalat Julien

Bossenger Chief Guide

Seen by the Syndic of the Commune de Chamouni for the "legalisation" of the signatures above in attestation of the veracity of every thing preceding. Aug. 18th 1855. Alf. Charlet. (Seal)

PROCEEDINGS OF THE CLUB

SECRETARY'S ANNUAL REPORT

Year 1937

With a slight gain for the year our membership is now just ahead of the previous maximum attained in November, 1933. Four Active Members have died: J. Gresham Machen, former President Judge Harrington Putnam, Dr. William Hunter Workman, in his ninety-first year, who was a Charter Member and later an Honorary Member, Thomas J. Homer, and also our Honorary Member, Lord Conway (William Martin Conway). Eight members resigned, one of whom repented and returned within six months. Arthur P. Harper of Wellington, New Zealand, has been elected to Honorary Membership. Twelve Active Members have been elected, and five former members have rejoined. There are now altogether 9 Honorary and 226 Active Members, a total of 234, as one, N. E. Odell, is carried in both categories.

Three meetings of the Board of Directors have been held; on January 23rd, April 10th and November 21st.

The ninth annual issue of the Journal appeared in April under Dr. Thorington's editorship. In November a "Climber's Guide to the Interior Ranges of British Columbia" prepared by Dr. Thorington for the Club was offered to the members, and is still available for sale.

Large accretions to the Library have occured during the year from the estate of J. Gresham Machen and from Mrs. Montagnier, the most important item from the latter being the complete set of the Proceedings and Journal of the Royal Geographical Society from 1830.

A dual committee headed by K. A. Henderson and including members from Colorado, California and Washington has adopted an audible and visual Distress Signal and Reply for use by parties in serious difficulty, and has made a beginning in the matter of training, with the view of eventually endorsing or licensing, qualified climbing guides in various districts of the United States which offer a degree of alpine climbing.

On November 20th Mrs. Frank Melville, Jr., very kindly invited about sixty members and guests to her apartment in New

York. Miss Kate Gardiner gave a beautifully illustrated account of New Zealand ascents, principally of the more remote Mts. Aspiring and Tutoko in the southern part of the Southern Alps. Fritz Wiessner told with slide and movies of his attempt on Kates Needle in the Alaskan coastal mountains with Bestor Robinson and Donald Brown, and also of the ascent of Devils Tower.

The outstanding achievement of the season was the ascent of Mt. Lucania (17,150 ft.) in Yukon Territory and traverse of Mt. Steele by Washburn and Bates. One of the most difficult short rock climbs ever made in the United States was the ascent (not the first, but the only one to date without ladders) of Devils Tower, Wyoming, by Wiessner, House and L. Coveney. A first ascent of Mt. Trident in the Selkirks was made by Misses Gardiner and Gest with C. Häsler and Edward Feuz. Weather blocked R. Whitney, Oscar Houston, Grant Pearson and Andrew Taylor on the E. ridge of Mt. Hayes in the Alaskan Range. Hall and the Mundays from Vancouver in almost continuous cloud did little but the ascent of the historically interesting "Stupendous Mountain" of Alexander Mackenzie from the Bella Coola valley, a district with possibilities.

HENRY S. HALL, JR.,
Secretary.

SECRETARY'S ANNUAL REPORT
Year 1936

Our membership has remained practically stationary during the year. Five active members have died— W.W. Dulley, Roger W. Toll, William F. Badè, Paul R. McIntyre and August Eggers. Nine members have resigned, and two have been dropped. Two honorary members have been elected, Sydney Spencer and Noel E. Odell, as well as fourteen active members. At the end of the year there were therefore ten honorary and 220 active members, a total of 228 (one less than the year before), as two, Dr. Workman and N. E. Odell, are carried in both categories.

Three meetings of the Board of Directors have been held during the year, on January 19th, May 2nd and December 5th. The Directors would probably meet more frequently if less travel were

involved for each meeting. As it is, action is often taken informally following correspondence between the Directors, important matters being referred to the first meeting thereafter.

The eighth issue of the Journal, completing the second volume, appeared in May, under Dr. Thorington's editorship.

On December 5th President and Mrs. Fisher entertained some seventy members and guests at their residence in New York. Walter A. Wood showed movies and colored slides of his work in Alaska last summer in the vicinity of Mts. Steele, Walsh and Wood, whilst engaged in survey and mapping work, partly from the air. Dr. Thorington showed movies of his trip with E. Cromwell to some of the peaks, hitherto unclimbed, between the headwaters of the Athabaska and Chaba rivers S. of Fortress Lake this past summer. W. R. Hainsworth showed movies of his climbs in the Alps last summer. All the pictures were well taken and showed clearly the great improvement in the possibilities of both ordinary and colored 16 mm. movie films and still pictures in the last year or two. After the talks, the gathering remained for refreshments and general sociability until quite a late hour. The whole affair was one of the pleasantest the Club has had in recent years.

On December 13th Mr. and Mrs. Farquhar entertained some of the western members at their home in San Francisco.

During the year our members have been conspicuously successful in the field. Five out of the eight members of the Anglo-American expedition to Nanda Devi were members of the Club, the four young Americans being also members of the Harvard Mountaineering Club, including its president and most recent ex-president. Four of our members made up a party, two of which, Wiessner and House, conquered Mt. Waddington, the latter being president of the Yale Mountaineering Club. Another party led by Bestor Robinson and R. M. Leonard also tried Waddington and climbed Mt. Bell in the Coast Range. Washburn continued his aerial photographing of the Alaskan mountains, bringing back superb movies of Mts. McKinley, Foraker, Hayes and other peaks of the interior Alaska Range. Hall made first ascents of Mts. Monarch and Silverthrone and explored the Klinaklini glacier in the Coast Range. Other members made first ascents in the Canadian Rockies (including Thorington and Cromwell) and elsewhere. Hendricks, with R. Gibson of the A. C. C., climbed Clemenceau

and Serenity (third ascents) and Robson (by Hall's 1934 route). The actual climbing season of our members was certainly one of the best in the Club's history.

This report, not in the 1937 Journal, is printed here as a matter of record.

Respectfully submitted,

HENRY S. HALL, JR.,
Secretary.

ANNUAL MEETING
1938

The 35th Annual Meeting of the Club was held at the American Geographical Society, Broadway and 156th Street, New York City, on January 15th, 1938, at 2.15 P.M. President Fisher presided, and there were forty-two members present. The Minutes of the previous Annual Meeting were read by the Secretary and voted approved. The Secretary's Annual Report was read and after slight changes voted approved.

Miss Helen I. Buck read her considerably condensed library report, showing a total of 3125 volumes including important additions during the year. Her report as usual indicated an immense amount of devoted and painstaking work necessitated by the rapid growth of the library, complete reorganization of the card catalogue and rearrangement of books on the shelves. A duplicate or lending library of several hundred volumes is also being built up. A vote of thanks to Miss Buck was moved and passed (Report printed in full below).

Henderson summarized a more detailed report made earlier to the Council of the work to date of the dual committee of which he is chairman: Guides Training and Distress Signals (printed in full elsewhere). Perhaps the most important conclusion reached relative to professional mountain climbing guides in the United States was that it would be necessary for a man to have other sources of income during the year to enable him to earn a living, of which ski instruction and guiding was the most promising. A vote of thanks to Henderson and the committee was moved by Cromwell and passed.

Fisher read a tentative Budget for 1938 which was voted approved. He said that three members were still in arrears for 1937 dues, and that nearly half of 1938 dues were already in.

Howard Palmer, Chairman of the Nominating Committee, reported the following recommendations:

Officers for 1938-1940

President	James Grafton Rogers	New Haven
Vice-Presidents	Walter A. Wood, Jr.	New York
	Carl A. Blaurock	Denver
Secretary	Henry S. Hall, Jr.	Boston
Treasurer	Joel Ellis Fisher	New York
Councillors	Carlton P. Fuller	New York
	Charles S. Houston	New York

Continuing Councillors are:

1938

Thomas D. Cabot	Boston
W. B. Osgood Field, Jr.	New York

1938-1939

Howard Palmer	Westerly, R. I.
Kenneth A. Henderson	Boston

There being no further nominations, Gilman moved that the nominations be closed, which was seconded and carried. This was followed by a motion and carried instructing the Secretary to cast one ballot for the slate. This being done the above were declared duly elected.

Fisher summarized briefly the situation in some of the National Parks, where a number of our members (including some of our ablest climbers) have been prevented by the Parks authorities from climbing the peaks, presumably because of accidents which have occurred in the past, generally to inexperienced and ill-equipped parties, and the resulting criticism by press and public of the Parks officials. Cromwell told of being turned back from Mt. Rainier and Wiessner from Devils Tower, and O. Houston spoke of restrictions in McKinley Park, and Henderson indirect similar reports from Zion Park. Henderson also explained the situation in Grand Teton Park where there are experienced climbers on the Park staff. Here with the highest standard of rock climbing in the United States a broader view is taken. Prospective climbers are talked with by Park officials. If considered competent they are given information or advice and asked to report after the climb. To parties considered insufficiently experienced, guides are sug-

gested. In every case explanation and warning of the difficulties and dangers involved are made to parties in an effort to prevent "blind" risks being taken.

The situation had been rather thoroughly discussed the previous evening at a meeting of the outgoing and incoming Officers and Councillors and several others with the new President, Mr. Rogers, who had stated that he would take the matter up with the proper authorities in Washington. The following resolution prepared by Gilman was read and upon motion by Fuller was unanimously carried by the Annual Meeting:

> *"Resolved,* That the President of the Club be authorized to communicate with the National Parks Service and urge the adoption of a liberal policy by the Service in encouraging mountain climbing by experienced persons in the Parks."

Spadavecchia asked about changes in the publication of the climbing records in the 1938 club book. Statement was made by Fisher. Comments were invited by Hall who said that form of publication would be similar to the 1932 lists unless there were other suggestions and a demand for different arrangement. There being no positive opinions expressed on this point, Cabot moved that Hall be empowered to go ahead with their publication in such form as he thought best, which was so voted.

A motion of thanks to Thorington for his work in preparing the Interior Ranges Guidebook was moved by Palmer, seconded by Cabot and passed.

The meeting adjourned at 3.30 P.M.

Immediately thereafter, the Director of the American Geographical Society, Mr. Raye R. Platt, upon invitation, made a brief statement to the members as to the work of the Society. He spoke of the Society's map collection as the most complete in the Western Hemisphere, the very comprehensive library, and the fact that about 800 periodicals are received and on file. There is a Research Catalogue and a file containing a critical selection of articles from periodicals. Efforts are being made to arouse more general public interest in the Society, and its facilities are available to all properly accredited consultants (among whom the members of our club were kindly included). He then invited all present to accompany him on a brief tour of the building. The map room in particular proved so alluring that the members were torn away only with difficulty, to listen to the following illustrated talks:

Colored movies of climbs and travel in the Canadian Rockies, including Mt. Bryce and first ascent of Mt. Trident in the Selkirks by Miss Lillian Gest.

Movies of rock climbing in the Alps including the Grépon by L. I. Grinnell.

Colored movies of Mt. Hayes, Black Rapids Glacier (the marathon ice stream of Alaska), and Mt. St. Elias from the sea by Oscar Houston.

Slides of Muir Glacier, Mt. Ararat, and peaks of the Alps from photographs taken forty years or more ago by our charter member, Prof. Harry Fielding Reid.

ANNUAL DINNER

The Annual Dinner was held the same evening in the ball room of the Cosmopolitan Club, 129 East 65th Street, New York. It was the largest in the club's history, there being 126 present, equally divided between members and guests. President Fisher presided.

After dinner Fisher called upon Ranger Rogers, a law student at Yale and son of our new President who was prevented from being on hand by an important engagement of long standing. He read a very graciously expressed letter from his father.

Walter A. Wood, Jr., showed colored movies of his flight over the Grand Canyon and ascent of Shiva Temple with the American Museum of Natural History party in September, 1937.

Oscar Houston showed a film of the attempted ascent of Mt. Hayes in the Alaska Range. The approach was made by air from Fairbanks. Views of the ice-clad peak in various lights were shown, from pink glow to cold blue. The lighting effects were at times almost eerie. The whole film gave to an unusual degree the atmosphere of the surroundings.

Professor Reid again showed a few of his fine slides, and was greeted with hearty applause.

Bradford Washburn spoke of the excellence of Professor Reid's slides especially when one recalled the apparatus used forty years ago in contrast to the improved films, filters and other elaborate equipment of the present day. He then completed the evening with an account, illustrated as usual with superb pictures, this time mostly colored slides, of his first ascent with R. H. Bates of Mt. Lucania (17,150 ft.) in Yukon Territory, traverse of Mt. Steele

(16,660 ft.) and crossing of the range on foot to Kluane Lake, a great adventure and one of the finest exploits in the history of Alaskan mountaineering.

HENRY S. HALL, JR.,
Secretary.

REPORT OF THE TREASURER

Receipts to January 1, 1938:		
Dues—1 life member	$ 200.00	
6 at $15	90.00*	
122 at $10	1,220.00	
64 at $5	320.00	
1 at $15 (1938)	15.00	
7 at $10 (1938)	70.00	
5 at $5+ (1938)	27.00	
		$ 1,942.00
Profit on securities sold (2M U. S. A. 4 '44)		88.55
Interest and dividends received		425.02
Library books sold (surplus stock)		62.80
Old A. A. Journal sales		24.10
Miscellaneous including Guide Book sales		94.74
		$ 2,637.21
Disbursements:		
Rooms		$ 1,108.99
Library—Cataloging	$ 278.41	
New cabinets	286.62	
Freight on acquisitions	99.00	
Miscellaneous	38.52	
	$ 702.55	
Less withdrawn from Library Fund to cover capital acquisitions	622.03	
		80.52
Guide instruction account		111.10
Distress Signal Cards (7000 distributed)		84.80
Journal and Index	$ 725.07	
Less ads	$168.24	
Less sales	57.00	
	225.24	
		499.83
Publication "Guide to the Interior Ranges		350.00
Miscellaneous, postage, etc.	$ 200.79	
Less contribution	100.00	
		100.79
Reserve—1 life membership	$ 200.00	
1938 dues paid in advance	112.00	
		312.00
		$ 2,648.03
Deficit for year		10.82
		$ 2,637.21

* Of this $312 are life or 1938 a/c.

Balances:	*1/1/37*	*12/31 37*
General a/c Chase National Bank	$ 1,023.53	$ 1,113.15
Map a/c, Chase National Bank	100.00	100.00
Whymper Fund (Brooklyn Savings Bank)	201.42	212.13
Library Fund (Brooklyn Savings Bank)	890.48	289.80
Reserve Fund (Brooklyn Savings Bank)	515.24	532.21
Club House Fund (Brooklyn Savings Bank)	2,825.12	5,194.32
Securities at cost (all Club House Fund except one U. S. A. Bond, in Reserve Fund):		
2M U. S. A. 4's 1944	2,295.22	.....
1M U. S. A. 4's 1944	1,103.33	1,103.33
1M Nor. Pac. Pl. 4	866.36	866.36
1M So. Pac. S. F. T. 4	829.61	829.61
Gteed. Mtg. ctf. Bond Mort. Co.	3,000.00	3,000.00
Gteed. Lawyers Mort. Co.	3,000.00	3,000.00
10 General Gas & Elect. prior 5% pfd.	991.67	991.67
	$17,641.98	$17,232.58

Reconciliation of Balances, 1/1/37:	
Total	$17,641.98
Less deficit	10.82
Less profit on securities sold	88.55
Less capital appropriation for library	622.03
Plus reserve for life membership	200.00
Plus reserve for 1938 dues paid in advance	112.00
	$17,232.58

In addition, there are contents of the Club House Rooms as follows:

Approximately 3000 volumes in library, acquired:	
(a) Mostly freight and cataloging at cost of	$ 959.82
(b) Donations, estimated value over $6,500	
Bookcases and furniture acquired:	
(a) Mostly bookcases, at cost of	563.32
(b) Donations, estimated value over $500	
Alpina Americana, etc., in vaults of Waverly Press, Baltimore	.....
Total cost to Club	$ 1,523.14
Estimated value of donations	7,000.00

The above are insured for $8,500.00.

Budget for 1938

Estimated Receipts:		*Estimated Disbursements:*		
Dues	$1,850.00	Rooms		$1,100.00
Interest and dividends	400.00	Library a/c		100.00
Miscellaneous receipts	250.00	Journal		600.00
	$2,500.00	Climbing Records	$600.00	
		Less approximately, 1936	100.00	
				500.00
		Miscellaneous		200.00
				$2,500.00

JOEL E. FISHER,
President.

REPORT OF THE LIBRARIAN

The library continues to grow, the present total being 3125 volumes, an increase of 511, most of the additions being from the estates of J. Gresham Machen and Henry F. Montagnier. Mr. Comstock, Dr. Gilmour, Mr. Greene and Dr. Thorington were additional contributors, Dr. Ladd and Mr. Gilman presenting many unbound journals. At the Council Meeting held January 15th, word was received that, through the generosity of a member, further acquisitions would be received from the collection of Judge Putnam, a former president.

The new volumes of 1937 required the purchase of twenty bookcase sections, while the journals, reprints and duplicate magazines have been placed in ninety-six filing cases of various sizes. In exchange for certain duplicates the Geographical Society of Philadelphia sent an interesting painting of a party landing on the Greenland ice. Mr. Hall supplied a photo of Dr. Workman, and Mr. Comstock a picture of Lake Agnes.

The Library Committee wishes to remind members of the Lending Library of 265 books. It is hoped that members will avail themselves of the opportunity to purchase books from us, as the sale of duplicates is an important factor in reducing library expenses.

HELEN I. BUCK,
Librarian.

REPORT OF THE COMMITTEE ON DISTRESS SIGNALS

This committee appointed in the spring of 1937, as a result of its investigation, chose a signal as the official distress signal which had a practically unanimous backing by all those consulted. Many letters were written consulting with other mountaineering clubs and official bodies in this country, and the opinion of club members invited. The committee is indebted to the zeal of Mr. Fisher in carrying on much of the preliminary correspondence, the results of which were turned over to it enabling it to act more quickly upon its appointment.

The choice lay between the so-called International Distress Signal used throughout Europe and the American signal used on this continent from the time of the earliest settlements. The latter signal was with one exception the unanimous choice of all those

consulted, having four important advantages. One: it was easy to send, no timing being necessary. Two: it was more certain of reception as it was short, sharp, and insistent requiring no concentration to distinguish it from other signals, as was necessary on a timed signal. Three: it was already being taught and used by many including notably the Boy Scouts. Four: it was already in use by woodsmen, trappers, miners and others who would be found in the wilder parts of the country where reception and understanding of a distress signal might be most important. For all these reasons it seemed advisable to select this particular signal.

All Outdoor Uniform Distress Signal.—Three quickly repeated calls (audible or visual) repeated at regular intervals. Conserve your energy; use a whistle; flash a light; disclose a fire or smudge; wave something, *three* times quickly and repeat it regularly.

Anyone noting a distress signal is morally obligated to rescue the party in distress, or if he is incompetent to do so, to notify rangers, guides, or campers.

As a rescue party may cost the signaller a considerable expense, this Distress Signal, like the S. O. S. at sea, is never to be used except when outside help must be obtained.

Whoever receives such a distress signal should acknowledge it in any practical manner, preferably by *two* calls of similar character, repeated at intervals.

> *Note.*—European climbers have long used what is in effect the double of the American call, a signal repeated six times a minute repeated after a pause of one minute. The answering call is a signal three times a minute with a minute pause. Mention of this is made here for your information.

Some 150 mountaineering and outing clubs were communicated with this past summer, most of whom have replied advising of their adoption of the signal. Some 7000 small cards have been provided to these clubs for distribution to their respective members, while some 850 larger notices for public posting have been distributed for use in the National Parks, on the Appalachian Trail and on the ski trails of the White Mountains. The National Park Service and the U. S. Forest Service have officially adopted this distress signal and are cooperating with the club in publicizing it, either through posting of notices provided by the club or through publication in their literature for public distribution. The signal has also been broadcast at least once by radio. This fall all sectional ski associations were advised of the signal as well as several

individual ski clubs which have included information on it in their information booklets distributed to their members.

A valuable start has been made and it is to be hoped that the coming year will witness an even wider distribution of the knowledge of this important signal especially in the western mountains.

For the committee,

KENNETH A. HENDERSON,
Chairman.

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REPORT OF THE GUIDES' COMMITTEE

This committee has sought to raise the standard of mountaineering guides in this country by starting courses of instruction for guides and prospective guides preliminary to the institution of some system of licensing such guides.

A survey of the requirements for mountain guides abroad and in this country published in *Appalachia* for June, 1937, brought forth the need for more rigid supervision of guides and their proper training. Pursuant to the suggestions made in the aforementioned article, this committee has through its members situated in various parts of the country sought to enlist the aid and assistance of local clubs in carrying out its program for the training of men for this profession.

The cooperation of the National Park Service and the U. S. Forest Service has been obtained, and it is contemplated that eventually, if we are successful in our work, that a license will be a prerequisite for the practice of guiding in the National Parks.

In building up any corps of guides, it was felt that those men now acting in that capacity had a prior claim to our attention which should not be ignored. They have accordingly formed the nucleus of the groups which have been selected for training. At the same time, it was realized that except in a very few localities there would not be sufficient business to provide a good livelihood, and consequently we have not been anxious to include too many men. It is realized that mountain guiding must be combined with some other occupation, among which ski guiding, ski teaching, climbing and ski hut tending are the most obvious. There is a great need for the development of these other positions, and although your committee has made a start there is much yet to be done. The great growth in popularity of skiing has led to the belief that ski teaching or ski guiding offers one of the best supplementary occupations avail-

able, and the one offering the greatest immediate potentialities. This is particularly true in California where the terrain is better adapted to skiing than serious mountaineering.

As guides must depend on a reasonable volume of tourist travel, a start was made by organizing our courses in three main centers of tourist traffic: Denver for the Rocky Mountain region, Seattle for the Pacific Northwest, and San Francisco for California. Although the main outlines of the work done are similar, there are several variations which make a separate analysis of the work accomplished in each section advisable. In order that there might be a uniformity of requirements, a general outline of a course to be given was made by your committee and followed in the different sections.

In the Denver district, the local member of this committee was successful in organizing a course during the summer of 1937, during which much of the field outlined was covered. It is planned to have skiing instruction and trials this winter and a field trip for actual climbing on rock and snow next spring or early summer. As the number of potential guides in this group was very small some amateurs were admitted. It is planned to make another effort next spring in connection with the instruction now planned to obtain a larger enrollment of potential guides.

In the Pacific Northwest, the Seattle member of your committee has been signally successful in establishing cordial relations with the National Park authorities, the management of the Rainier National Park Co. which employs a number of guides, and also with the guides themselves. Four temporary certificates of approval were given during the summer to men who had good records and displayed competence to guide parties on Rainier. Several of our members who were in Seattle this past summer were able to give some lectures and practical demonstrations of climbing, which aided the efforts of your committee materially. A complete course of instruction based upon the outline drawn up by this committee is now being given in Seattle, and a ten-day field trip for practical demonstration and testing purposes is projected for this spring. As a result of this it is hoped to begin the granting of licenses at that time.

In California, no effort was made toward the development of instruction for guides or potential guides, as there appeared to be local feeling that the mountains there were too easy to require

professional assistance. While your committee realizes that the demand in that section will be small, it cannot help but feel that some facilities for engaging professional assistance should be available to the traveling public. Locally considerable attention has been given to the mountaineering education of amateurs; latterly with special emphasis on ski mountaineering. We should like to point out, however, that the traveling public does not always have connections with local groups and that the ability to engage a professional to accompany a lone traveler may mean the difference between a fine climb on foot or on ski, and no climb at all. Any development in the California district should place special emphasis on skiing, and should be started cautiously, but there is room, undoubtedly, even now for a few men to make a living there.

It is fitting at this time, that the sincere appreciation of your committee should be expressed to all those who have privately or officially assisted your committee in its efforts.

KENNETH A. HENDERSON,
Chairman.

IN MEMORIAM

HARRINGTON PUTNAM
1851-1937

The passing of our former president, Harrington Putnam, on April 7, 1937, reminds us that our Club has outlived its formative period and attained an established maturity. For Judge Putnam was an original member (1903)—one of that small but enthusiastic coterie which believed in the prospects for a successful alpine club in this country at a time when the craft was indulged in but sparingly and the possession of an ice-axe was a badge of distinction. Of these pioneers only a handful remain with us.

Judge Putnam at once took an active part in Club affairs, serving on the committee which arranged the second annual dinner in December of that year. For the term 1908-1911 he was elected Vice-President, with John Muir as President. Owing to the latter's residence on the Pacific coast, this was tantamount to assuming the active presidency. For the following term (1911-1914) Judge Putnam was elected president. During these six

years, he was most assiduous in his devotion to the Club, strengthening our society in every possible way and building up the list of members. Our present sound position owes no little to the groundwork lain at that time. He also served on the Council for six years (1914-1920).

As a young man Judge Putnam's athletic powers were extraordinary, pedestrianism and rowing being his favorite pursuits. In 1881 with a friend he rowed a two-seated scull from Cornwall-on-the-Hudson to Hoboken in one stretch of 15 hours. The distance is some 56 miles. When passing Rockland Lake they put a cake of ice in the stern and ate it during the day which was very warm. Some years before this he walked from Cooper Union in New York to Danbury, Conn., in 15 hours by way of White Plains, a distance of 60 miles.

His interest in walking and mountain climbing, developed while a student at Heidelberg University, continued until his death. One crisp and cold Friday morning in January, 1912, when he was sixty years old, Mr. Putnam left his Brooklyn home and walked 74 miles to Riverhead, L. I., where he was to open court on Monday. The temperature hovered just above zero during the week-end, but Mr. Putnam arrived with rosy cheeks, complaining that he had worn one too many sweaters beneath his overcoat. Two years later he scaled Mt. Marcy, the highest peak of the Adirondacks, after climbing Mt. McIntyre, the next highest, and Mt. Mansfield, in the Green Mountains, as tune-ups. At eighty, he often took the ferry to Staten Island and passed the afternoon climbing the hills there. He recalled that Edward Payson Weston, the transcontinental walker, was his close friend, and that he had accompanied Weston on several trips through New England.

Mr. Putnam was born in Shrewsbury, Mass., June 29, 1851, the son of Charles Adams Putnam and Ellen Harrington Putnam. He was a descendant of the John Putnam who settled in Salem, Mass., in 1634 and of Robert Harrington, who settled in Watertown, Mass., prior to 1650. He received his A.B. degree from Colby College in Waterville, Me., in 1870. He studied at Heidelberg University, Germany, in 1873. He received his LL.B. degree from Columbia University in 1876 and his LL.D. degree from Colby in 1906 and from Middlebury in 1911. He was admitted to the bar in 1876 and practiced in New York. He was a member of the firm of Wing, Shoudy & Putnam, later Wing, Putnam &

Burlingham, from 1885 to 1909. He served as an examiner of the New York State Civil Service Commission from 1884 to 1889 and for the Brooklyn Civil Service Commission from 1890 to 1894.

As governor of New York, Charles Evans Hughes appointed Mr. Putnam justice of the Supreme Court on November 9, 1909, to fill the vacancy left by William J. Gaynor, who was elected mayor of New York City. He was elected to the office in 1910 for a term expiring December 31, 1921. After his retirement because of age in 1921, he practiced admiralty law, in which he was probably the leading authority in the country, and then was appointed an official referee by the Supreme Court of New York State. During 1890 and 1891 he lectured on maritime law at Columbia, and was later a member of the law faculty of Cornell University. At one time he was an editor of the *Revue Internationale du Droit Maritime* and of the *Annals du Droit Commercial,* both of which were published in Paris. A lifelong Democrat, he served several terms as president of the Brooklyn Democratic Club, and helped to organize the Democratic League, an organization dedicated to clean politics, of which many independent Democrats of the state were members.

A well-authenticated story of the famous campaign of 1884, when James G. Blaine was running against Grover Cleveland for the presidency, is worth repeating here. Cleveland, standing strongly for reforms in the civil service, had attracted considerable support away from Blaine, but the latter as Secretary of State had taken a strong position against Great Britain and this gave him great strength among the Irish-Americans in the metropolitan district of New York who considered that he had "twisted the lion's tail" to good effect. The campaign waxed exceedingly close—so close in fact that a change of less than 600 votes from the Democratic plurality of 1047 would have thrown the state to the Republicans and decided the national election. At this juncture, the Rev. S. D. Burchard in heading a delegation of support to Blaine a few days before the election, said in a speech, "We don't propose to identify ourselves with the party whose antecedents are rum, Romanism and rebellion." When Judge Putnam read this in an evening newspaper in the Hamilton Club in Brooklyn where the Democratic managers were gathered, he banged the table and said, "This is just what we want," and went right out and had leaflets printed with "Schnaps, Romanismus and Ungeheuer" in

big letters. These were spread broadcast and displayed on flaring posters. It is generally accepted that enough votes were alienated by this phrase to turn the election to Cleveland. It is not often that events of such moment can be traced directly back to a trivial cause.

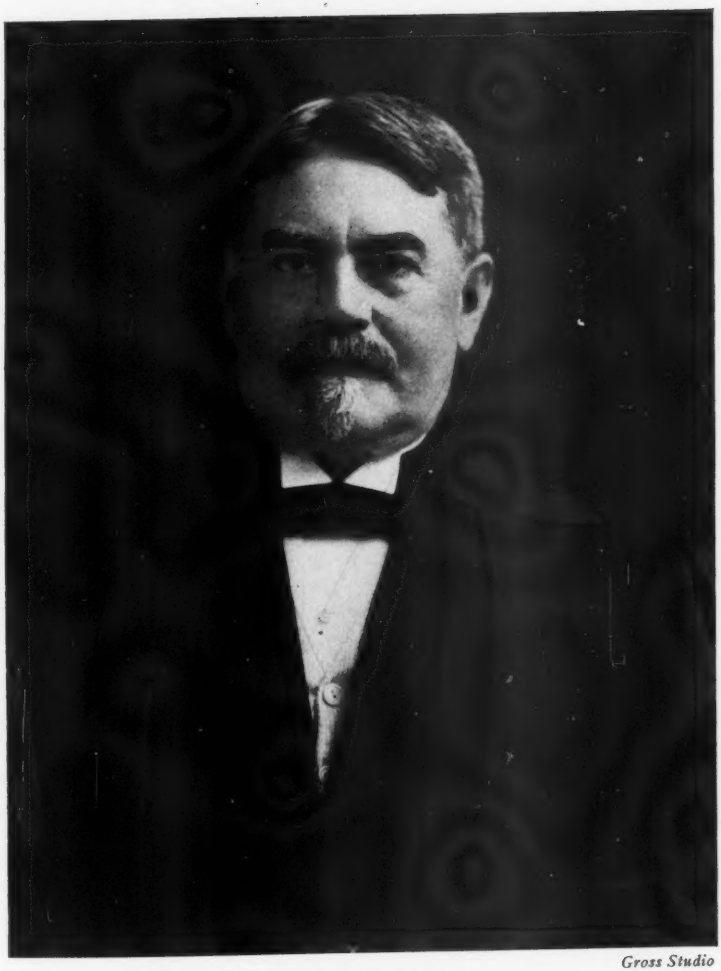
He had been active in the civic, social and religious circles of Brooklyn. He had been a trustee of the Brooklyn Public Library, head of the geographical department of the Brooklyn Institute of Arts and Sciences and a warden of St. Luke's Protestant Episcopal Church. Mr. Putnam had also been a member of the Long Island Historical Society and was president of the New England Society of Brooklyn in 1926 and had belonged to the old Hamilton Club and the Downtown Association. He served as president of the American British International Law Association of London in 1924 and held an associate membership in the Society of Naval Architects and Marine Engineers.

He served as president of the Fresh Air Club and had been a member of the Explorers, Petrarch, Alpin Français, Adirondack Mountain, Appalachian Mountain, Sierra, San Francisco and Green Mountain Clubs.

In 1926 as the representative of the American Bar Association he went to Japan to give an address at the dedication of the Anglo-American Law Institute in Tokyo. It is significant of his broad interests that he called on Admiral Togo, who commanded the fleet that destroyed the Russian armada in 1895, and on Yuko Maki, who had recently conquered Mt. Alberta in the Rockies.

Of a warm and amiable nature, his hospitable home in Brooklyn was often opened to mountaineers. "In the Heart of the Canadian Rockies," by Sir James Outram, was seen through the press from there. At his Catskill home, Red Lodge, in Denning, the members of the Fresh Air Club were often entertained *en masse* and one of his last public appearances was at their annual dinner a few years ago. Personally, he was rather reserved and possessed of imperturbable poise. Yet the play of his wit and quaint humor made him delightful company. His conversation was original and stimulating—often pointed with apt allusions from his wide range of reading. His genial presence will be sadly missed by a wide circle of friends.

H. P.



Gross Studio

HARRINGTON PUTNAM

(1851-1937)

WILLIAM HUNTER WORKMAN

(1847-1937)

WILLIAM HUNTER WORKMAN
(1847-1937)

With the death of Dr. Workman on October 7, in his ninety-first year, there passed the surviving partner, twelve years later, of that unique American couple who pioneered in the Himalayas at an age when most people have finished strenuous climbing.[1] Their great years were 1899 to 1912 when he was fifty-two to sixty-five and Mrs. Workman forty to fifty-three. At fifty-six he made a then world's record altitude climb of 23,394 ft., and in 1906 she made a world's altitude record for women of 23,000 ft. at the age of forty-seven.[2] In these fourteen years the Doctor and his indefatigable wife made six major expeditions in the Himalayas. They were perfect partners on these expeditions, he leading one year and she doing the scientific work, she leading the next, and he keeping the scientific records and diaries. Each expedition resulted in a profusely illustrated volume, all indispensable to mountaineering libraries as chapters in the history of Himalayan exploration.

Dr. Workman was born at Worcester, Mass., graduated from Yale in 1869, and from the Harvard Medical School[3] in 1873. After serving an interneship at the Massachusetts General Hospital, he took post-graduate courses at Vienna, Heidelberg and Munich. From 1875 to 1889 he practiced as a physician and surgeon in Worcester, after which ill health forced his retirement. In 1881 he married Miss Fanny Bullock of Worcester, daughter of Gov. Alexander Hamilton Bullock of Massachusetts. They had one child, a daughter, Rachel, now Lady MacRobert, who survives, and is the wife of Sir Alexander MacRobert of Aberdeenshire, Scotland.

In 1892 he and Mrs. Workman began a series of journeys by bicycle which in the next seven years carried them over much of Europe, into North Africa, Palestine, Syria, Turkey, and finally in the years 1897-99 they covered, still by bicycle, 1800 miles in Ceylon, 1500 miles in Java, and 14,000 miles through the length and breadth of India, visiting the Himalayas in 1898; all with the primary purpose of studying the people, their architecture and

[1] *Appalachia*, June, 1925.
[2] Exceeded only in 1934 by Mrs. Dyhrenfurth who reached an altitude of about 24,000 ft. on Queen Mary Peak.
[3] Then known as Massachusetts Medical College of Harvard University.

art. Still more travels took them as far as the temples of Angkor in Siam.

In 1899 came the first great Himalayan expedition to the Biafo Glacier in Baltistan. In 1902-3 they visited the Chogo Lungma Glacier, exploring and mapping virgin territory, and in August, 1903, the Doctor with his two Italian guides made the record climb on Pyramid Peak. In 1906 came the Nun Kun expedition where camp was pitched at 21,300 ft., and Mrs. Workman made her record climb. The 37-mile-long Hispar Glacier was ascended in 1908 to Hispar Pass, and the Biafo Glacier descended, a total ice journey of 74 miles. In 1911 they explored the region S. of the Baltoro, and also the Siachen Glacier, 50 miles long, the largest known glacier in the Himalayas. In 1912 they returned to the Siachen at the insistence of Mrs. Workman and crossed by the Kabery Glacier and Pass into Baltistan.

Dr. Workman made very extensive studies and investigations throughout on the physiological effects of high altitudes, the structure of ice and snow on the glaciers and snow fields, glacier movement, meteorological observations including maximum and minimum sun and shade temperatures (recording almost unbelievably high sun temperatures) and altitude measurements by aneroid and boiling point thermometer (hypsometer).

With Mrs. Workman he wrote nine books, five of which dealt with the high mountain expeditions, as follows: *In the Ice-World of Himalaya* (1900); *Ice Bound Heights of the Mustagh* (1908); *Peaks and Glaciers of Nun Kun* (1909); *The Call of the Snowy Hispar* (1910); and *Two Summers in the Ice Wilds of the Eastern Karakoram* (1917). In addition, he wrote many papers for scientific, geographical and alpine journals.

Both Dr. and Mrs. Workman belonged to and were honored by numerous European literary, geographical and alpine societies. They were both original members of the American Alpine Club and in 1914 were made Honorary Members. In 1925 after the death of Mrs. Workman in England, the Doctor returned to this country, and had spent his remaining years in Newton. He attended several meetings of the A. A. C., A. M. C. and H. M. C., until warned by his doctors to avoid evening engagements. Only two years ago he seemed to greatly enjoy a visit from Mrs. Dyhrenfurth who had just returned from her record climb of about 24,000 ft. on

Queen Mary Peak, at the head of the Baltoro; country which he had known so well twenty-five years earlier.

H. S. H., Jr.

LORD CONWAY OF ALLINGTON
1856-1937

Lord Conway of Allington, to the older generation Sir William Martin Conway, distinguished honorary member of the American Alpine Club, died in London on April 19th, 1937, at the age of eighty-one.

Thirty years of climbing included the Alps, the Andes, Spitzbergen and the Himalayas. New routes on many of the Monte Rosa summits, on the Zinal Rothorn, the Piz Bernina, and a great variety of passes clearly show his opposition to "centrists." A tour of some forty Alpine peaks and passes with Gurkha porters in 1894 was a unique summer; in the Andes, Illimani (first ascent) and Aconcagua; in the Himalayas, the Hispar Pass, Pioneer Peak, and Crystal Peak, and in Spitsbergen, a multitude of first ascents give an outline of his travels.

Art was his other hobby, which crystallized in the sport of collecting, and he was a trustee of the famous Wallace Collection in London for eight years, as well as trustee or officer of other galleries and archeological societies.

As a writer, he is best known to climbers for his part in the Conway and Coolidge Series of Climbers' Guides to the Alps; he was the author of some fifteen other books on many phases of the mountains, dealing often with their artistic sides; and has left a delightful review in "Mountain Memories."

In 1918 he was member of Parliament for the combined English Universities.

His death will leave all climbers the memory of a life that did a great deal for making mountain climbing a lasting value to modern civilization, and for steering the younger generation of climbers towards their true goals.

J. E. F.

BOOK REVIEWS

The Ascent of Nanda Devi, by H. W. Tilman. Foreword by Dr. T. G. Longstaff. xii and 235 pages, 36 illustrations, 2 maps, index. New York: Macmillan Co., $3.50. London: Cambridge University Press, 12/6.

It is perhaps unwise for one member of an expedition to review a book about that expedition written by another, for if the review be favorable the allegation of "vested interests" might be made; if unfavorable, the charge of internal rivalry is a possibility. It is proverbial that a man's severest critic is often his best friend. However, in the present instance criticism of an adverse character would be difficult to justify, for Mr. Tilman has written an extremely able book.

The impression one gains immediately upon reading *The Ascent of Nanda Devi* is of the capable way in which Mr. Tilman has handled his material. The accuracy of his chronicle I know to be unimpeachable. His sense of evaluation and perspective are excellent, for in dealing with any great theme it often is hard not to allow that theme to dominate at the expense of the general effect. This danger Mr. Tilman has carefully avoided.

The book presents an effective and well-balanced picture of what actually took place, of what was said and thought by the men who took part in the venture and of what befell them. The book is a sensitive and human account lightened with a delightful and versatile humor, completely catching the spirit of the whole enterprise. Where so much depended upon teamwork, a sense of humor was indispensable. The book seems to have been written not only for the public in general but also with a peculiar intimacy for those who participated in the adventure. I disagree with Mr. Tilman's prefacing remark that "any blockhead can write a book if he has something to write about." I would amend that by saying that any blockhead can ruin a book no matter how much there may be to write about. Assuredly Tilman is no blockhead.

The Ascent of Nanda Devi is written in the best tradition, with the moderation becoming an accomplished mountaineer. To the average person this restraint may seem out of proportion to the requirements, but here again Mr. Tilman has had in mind an audi-

ence of those familiar with the problems of ascending high mountains, and for them it is sufficient to state the unadorned facts without dramatizing them. A peak such as Nanda Devi needs little dramatization.

In criticizing the book one might be tempted to observe that too much emphasis has been placed upon the approach to Nanda Devi and too little upon the actual ascent. However, inasmuch as this approach involved difficulties comparable to those in making the climb, and inasmuch as Mr. Tilman has followed very closely the course of events such a criticism has no validity. Perhaps the final days of the ascent might have been dealt with more fully for it seems to the reviewer that this chance for a logical climax has been somewhat neglected. However, one must remember that the climbers themselves do not always experience such a climax, and Tilman here avoids the danger of including in a general description too many of the technical details which more properly belong in specialized articles on the subject of high-altitude mountaineering.

The book is not without its moral, on the other hand, for as Mr. Tilman has brought out, there were several aspects of the expedition which might give one pause for thought. The party was comparatively small and lightly equipped. The defection of the porters at several points, while it entailed considerable inconvenience, was not entirely unforeseen and thus did not prove a critical factor. The arduous back-packing which resulted does not appear to have affected the climbers adversely but may have actually benefited them in earlier acclimatization. The monsoon season in the Central Himalaya did not provide the terrors which might have been expected. Lastly it was possible to run a successful international expedition on the basis of teamwork without having any formally recognized leader.

The illustrations while adequate in number have not been reproduced by any means as well as the originals would lead one to expect. An appendix on the mountaineering aspects of the expedition would be most useful for future reference, as well as a bibliography dealing with the Nanda Devi region. In view of the earlier volume by Mr. Shipton, *Nanda Devi,* it is a pity that the same publisher was not used in the present instance, for *The Ascent of Nanda Devi* would have made a fitting companion-piece to the story of the first entry and exploration of the "Basin."

The British-American Expedition of 1936 was the logical result of the fine work of Shipton and Tilman in 1934. An added advantage of pairing the two books would have been the saving of some duplication in the descriptions of the region and of the approach through the Rishi Gorge.

Mr. Tilman's book makes the expedition seem what it was, a great and light-hearted adventure conceived and carried out in the true spirit of the game. May he write as effectively next year on that greatest of all adventures, an attack on Everest.

A. B. E., III.

A Climber's Guide to the Interior Ranges of British Columbia, by J. Monroe Thorington. Published by the American Alpine Club, 140 East 46th Street, New York City, 1937. 149 pages. Price $2.00.

The appearance of this book may rightly be hailed by our membership with gratification. It represents the fruition of an enterprise begun by the club nearly a score of years ago with the publication of the first climber's guide to the Canadian Rockies. While it was then hoped that a companion volume might ultimately be issued to embrace the adjacent interior ranges, the hope seemed almost chimerical, for, excepting the Selkirks, only a small part of this territory had been climbed in, and the remainder was so extensive and formidable of access that half a century might elapse before enough material for a guidebook would accumulate.

And yet the book is now before us and it treats of more than 300 peaks! This does not mean that all the worthwhile mountains included in the 20,000 square miles of the Selkirk, Purcell, Monashee and Cariboo groups, which constitute the subject matter of the text, have been ascended, but it does mean that an astonishing amount of pioneering has been completed and the highest summits attained. The principal climbing activity of recent years has concerned itself with the Purcells and this range may now be considered to have yielded up its last topographical secrets, although the virgin "Snowpatch Spire" still offers a standing challenge to the craft.

Speaking broadly, there remains to be explored only the belt of territory at the northerly ends of the Selkirks and Monashees and around the core of the Cariboos. Is it too much to hope that some keen mountaineer from our ranks will turn his steps thither and

carry the insignia of the club to new heights, exactly as these pages show that his fellow-members have done so effectively and so often in the past? Yuko Maki came from Japan to attack Mt. Alberta because he read about it in the first edition of the guidebook. Perhaps history will repeat itself, but with cast and scenery altered. We shall see.

Meanwhile this small volume demonstrates that the club is steadily pursuing its professed objectives: the encouragement of climbing and the dissemination of knowledge about mountains—in fact, it constitutes a notable milestone along this road. Apart from its utmost utility on the peaks, it epitomizes the history of the region covered and serves as a most convenient index to the existing literature and maps. The labor and devotion of the author, both afield and in literary research, are beyond all praise and place every mountaineer thereabouts heavily in his debt.

H. P.

On the Admiration of Mountains, by Conrad Gesner. 4to.; 55 pages, with 8 illustrations. Edition limited to 350 copies. San Francisco: Grabhorn Press, 1937. Price $5.00.

In a finely printed volume are presented the first complete English versions of Gesner's letter on Mountain Admiration (1543), as well as his description of Mt. Pilatus (1555), the translations having been made by H. E. D. Soulé. These essays by the famous Zürich physician contain the new note of the esthetic sense acknowledged in relation to climbing—"for the sake of good bodily exercise and of mental delight"—and afford a graphic picture of the knowledge and pleasures of the mountain traveller four centuries ago.

J. Monroe Thorington has contributed a biographic sketch of Gesner, and, in addition, an analysis of the contemporary mountaineering background as described in Emperor Maximilian's *Theuerdank* (1517), from which work the entertaining illustrations are also taken. Dr. Thorington and Dr. Dock have added bibliographic notes to a book which may be praised as a work of art because of its beautiful printing and binding. The initial letters by Dorothy Grover are in line with the high quality of the whole production.

W. S. L.

Over Tyrolese Hills, by F. S. Smythe. xv + 297 pages, with illustrations, map and index. London: Hodder & Stoughton, 1936.

In the summer of 1935, as a preliminary to a more arduous Himalayan journey, the author, accompanied by a Canadian, Campbell Secord, walked and climbed across Tyrol. They began in the Silvretta and ended at the Gross Venediger, visiting the Oetzthal, Stubai and Zillerthal areas, and enjoying it all immensely. And so they should, for Tyrol is the country for wandering, in the sense of Martin Conway's *Alps from End to End,* and as Tuckett, John Ball and others were accustomed to travel. Passes are crossed and peaks traversed, the people are kindly and the scenery is incomparable. The author describes it entertainingly, adding useful information and much sensible opinion.

One should note the beautiful pictures, but the author forgets that crossing from the Zillergrund to the Krimmler Tauernhaus brings one out of Tyrol into Salzburg, and that the Venediger is in the latter province. Incidentally, the Venediger does not take its name from any fancied view of Venice from its summit, impossible with the Dolomites intervening, but from the fact that in olden time it stood on the boundary of Görz, once possessed by the Veneti—although never by Venice. J. M. T.

Kampf um den Berg, by Robert Montis. 8 vo.; 239 pages, with 8 full-page illustrations, and numerous smaller drawings. Graz: Verlag Styria, 1937.

The Gesellschaft Alpiner Bücherfreunde has chosen as its most recent offering a volume (Band 6, Die Deutschen Bergbücher) containing first or early descriptions of some classic ascents in the Eastern Alps. The conquest of the Gross Glockner is taken from the diaries of Vicar Sigmund von Hohenwart, and one reads of the Hochgolling as it was described by Archduke John. The Hochkönig and the Ortler ascents are from Thurwieser's records, while von Kürsinger records the attempt on the Venediger by Archduke John, as well as the first ascent of the mountain later on. Dachstein, Wildspitze, Langkofel and Triglav are among the additional peaks included, von Rosthorn's account of the latter being published for the first time. The illustrations from old prints, and the lively sketches which are used as chapter headings, add to this attractive book. J. M. T.

L'Oeuvre scientifique du Club Alpin Français (1874-1922). 8 vo.; pp. 518, with illustrations, maps and index. Paris, 1936.

In an impressive volume the scientific committee of the French Alpine Club presents the club's work over a period of fifty years, dividing it into the periods 1874-1902, 1903-1914 and 1914-1922. During the first period, which begins with the foundation of the C. A. F., there was no special organization of research effort, but topography, glacialogy and speleology were studied by such men as H. Ferrand and E. A. Martel. In the second period the topographical work was dominated by Henri Vallot, while in the post-war period cartography was emphasized by the publication of the maps of Mont Perdu, the Picos de Europa and the Vallée de Sales, and the triangulation of the Cauterets area. Altitudes and mountain nomenclature have received much attention, the work culminating in the triangulation of the French Alps by P. Helbronner between 1914 and 1922.

J. M. T.

Odle, Sella, Marmolada, by Ettore Castiglione. 12 mo., 778 pages, 8 maps, 86 drawings and 32 photographs. Published by the Italian Alpine Club and the Italian Touring Club, 1937.

This volume is one of a series of guidebooks to the Italian mountains published by the Italian Alpine Club, and deals with the three groups of Italian Dolomites named in the title. The first chapter is a survey; geographical, glacial and historical, with an outline of the flora, fauna, and alpinistic history of the region. The second chapter deals with the various ways of approach. The different refuges, huts and bases for climbing are next described, after which each group is taken in turn and climbing routes given in detail. It ends with ski itineraries. The book is well and profusely illustrated with photos, drawings and maps.

H. B. J.

Le Grigne, by Silvio Saglio. 12 mo., 492 pages, 8 maps, 88 drawings and 56 photographs. Published by the Italian Alpine Club and the Italian Touring Club. 1937.

An interesting and well-written guidebook describing that group of mountains which lies near the Lake of Como, or to be more exact, near the Lecco arm of the Lake of Como. They might be

called pre-Dolomites. The first chapters include descriptions of the mineralogy, geology, hydrology, flora and fauna, with notes on history. The next chapter deals with the ways in which one may arrive there, while the third considers its refuges and huts, and the fourth its mountains with their many and varied towers, peaks and needles. The sixth is a short chapter on the caves and galleries of Le Grigne. There is also a chapter on skiing. The drawings, photographs and maps admirably supplement the text.

H. B. J.

VARIOUS NOTES

Wyoming Rockies

Teton Range

Although the 1937 climbing season in the Tetons was shorter than usual (June 24th-September 17th), a large number of mountaineers visited the region, concentrating upon Grand Teton and Mt. Owen. Six of the eight established routes on Grand Teton were utilized by various parties, while on Mt. Owen four of the five known routes were employed. With the exception of Mt. Wister all of the major peaks were climbed. The annual outing of the Mazamas was held in late July, followed by the outing of California Alpine Club in early August, both groups encamping at String Lake, with a total of more than 100 climbers and hikers. The guide service was again conducted by Paul Petzoldt, assisted by Eldon Petzoldt and Glenn Exum.

Only one original climb was reported—an ascent of Grand Teton from the head of Teepe Glacier on the S. W. side by William House, Paul Petzoldt and the writer. Free of ice in late season, the route proved less difficult than anticipated and required little more than five hours from timberline. Descent was made by the E.-S. buttress, the route differing in part from that of 1931.

A third ascent of the N. corner of Grand Teton (Fryxell-Underhill, 1931) was accomplished by Adams Carter and Paul Petzoldt; and the ascent of Mt. Owen by the N. arête (Fryxell-F. Smith, 1931) was repeated by Jack Durrance, Percy Rideaut and George Sheldon. The approach to the arête, however, was made from the N. shoulder of Grand Teton, involving a first crossing of Gunsight Notch.

Phil D. Smith.

Colorado Climbing Notes, 1937

The Colorado mountaineering season of 1937 started with the usual New Year's Day trip up Pikes Peak. This is the regular annual trip of the Ad-Am-An Club of Colorado Springs, who each year climb Pikes and initiate one new man (add-a-man) into the club to the accompaniment of a brilliant display of fireworks, which on a clear night is visible from points one hundred miles distant. A solo climb of Longs Peak was also made on New Year's Day by Ernest Fields, a ranger in the Rocky Mountain National Park.

As the winter progressed, week-ends found crowds of skiers roaming the mountains in the vicinity of Berthoud Pass, 60 miles W. of Denver. On one of these trips a party of two young men was engulfed and killed by an avalanche, within a quarter of a mile of the auto road, their bodies not being found until late in May.

With the advent of summer, numerous climbing expeditions were roaming over the state, some with the intention of making some of the few remaining first ascents, others to climb by seldom-used or new routes up the better climbs. July in particular saw several unusual ascents. A party consisting of Robert Ormes, Jack Seerley, Lloyd Griffiths, Melvin Griffiths and David Lavender, spent the first two weeks climbing and exploring in the Needle Mountains. On July 5th, Elwyn Arps, Harold Popham and Carl Blaurock climbed Capitol Peak in the Elk Mountains by way of the W. face, a first ascent up this side and by the same route which defeated the party the previous year due to lack of proper equipment. On the 17th of July, Robert Ormes and Jack Seerley climbed the E. arête of the Crestone Needle in the Sangre de Cristos, a second ascent, Albert Ellingwood and party having made the first ascent in 1925. Later in the month Melvin Griffiths and party succeeded in climbing Index Peak in the San Juans near Telluride, after having made previous attempts.

On August 2nd, Jack Stickles of Loveland, Col., made a first ascent on the W. side up Chimney Rock, a 250-ft. sandstone butte on the Colorado-Wyoming line. This was followed on August 10th by a second ascent up the S. side by Robert Ormes and Roy Murchison.

During the final two weeks in August, the Colorado Mountain Club held its annual outing in Chicago Basin of the Needle Mountains, during which all the major peaks were ascended. The outstanding accomplishments on this outing were the traverse of the long jagged ridge from Jupiter to Mt. Eolus, by Jack Seerley, and the tedious long day's trip up Pigeon and Turret by Elwyn Arps and party.

Among the outstanding accomplishments of the season was the climb of all fifty of the 14,000-ft. peaks in the state by Carl Melzer, his son Bob, nine years old, and Junius Johnson in thirty-nine climbing days. Last year this same party traversed the Continental Divide from Wyoming to New Mexico. On both these expeditions a remarkably beautiful record of kodachrome movies was made.

On Labor Day, Mary Cronin and Carl Blaurock made a second ascent of Blanca Peak via the N. E. ridge and face of the peak. Then on the 19th of the month a party of six made a first ascent on the N. E. face of Navajo Peak in the Front Range.

The summer climbing season closed with another attempt on Shiprock, an 1800-ft. volcanic remnant in the desert near Gallup, N. M. The party, consisting of Melvin Griffiths, Gordon Wil-

liams, William House and Robert Ormes, after a great deal of difficult climbing were defeated within 300 ft. of the summit, but have in mind another attempt this year.

This is merely a synopsis of some of the more interesting mountaineering carried on during the past season, and does not by any means enumerate all the serious climbing which occurred in the Colorado Rockies. There were numerous trips up the E. face of Longs Peak by various established routes, as well as other climbs throughout the state which lack of space precludes mentioning. Now that the winter season is here again numerous skiing ascents are being planned by the Colorado Mountain Club and individual members.

CARL BLAUROCK.

ROCKY MOUNTAINS OF CANADA

A Note on the Chaba Glacier. On July 7th, 1933, being encamped in the eastern fork of the Chaba, E. Cromwell and the writer reoccupied the glacial observation station made by the Harvard party of 1927, at which time (July 28th) the ice was within 45 ft. of the station. At the time of our visit the ice had retreated an additional 559 ft., roughly 62 ft. annually. Photographs were taken from the station, and a record left with the figures of the 1936 measurements.

On July 6th our party had ascended through the main icefall to the summit of the present Chaba Peak, expecting it would be a first ascent. We found, however, the record of E. Schoeller, of Breslau, and the guide, Julius Rähmi, of Pontresina, who ascended the mountain on September 6, 1928, while on a hunting trip. The peak was not attempted by the Harvard party of 1927.

As already stated in the *Climber's Guide,* this is not the peak to which Habel gave the name "Chaba." On July 8th we ascended the peak 10,300 ft., one mile further east, and found Habel's record of August 1st, 1901, on the summit. Habel was accompanied by the packers, Fred Ballard, of Banff, and Dan Campbell, of Michigan, their climb having been made "on a beautiful cloudless day." The fact that, following Habel's account (*Appalachia,* x, 34), we were able to proceed directly to his peak and find the record is sufficient refutation of Wheeler's statement (*Alta.-B. C. Boundary,* Part II, 73) that "the the description given is too vague to permit the certain identification of either ['Mt. Eden' or 'Mt. Chaba']."

Saskatchewan Glacier. No measurements were made, but the upper course was examined from Castleguard meadows on July 1st, 1937. The glacier has receded more than 200 ft. from the S. lateral moraine where horses were taken on the ice in 1923. This is

now impossible, the marginal lake having drained away, leaving a deep basin of moraine, its glacier side bounded by an almost perpendicular ice-wall about 100 ft. in height.

♣

Freshfield Glacier. Observations made on July 5th, 1937, complete a fifteen-year period since the first measurements were undertaken (1922). Photographs from Camp Station and Station C afford further evidence of the subsidence of the tongue through ablation, about one-third of the total volume of the tongue having been lost in fifteen years.

The total retreat of the tongue since 1922 amounts to 1312 ft., as follows:

Retreat	*Feet*	*Average per day inches*
1922-26	330	2.67
1926-30	253	2.09
1930-34	317	2.60
1934-37	412	4.50

The great boulder on the ice has advanced 1551 ft. in fifteen years, and is now exactly on the line surveyed in 1922:

Advance	*Feet*	*Average per day inches*
1922-26	505	4.01
1926-30	426	3.52
1930-34	345	2.78
1934-37	275	3.0

It is apparent that the tongue's retreat, uniform from 1922 until 1934, is now accelerating, seemingly due to additional stream erosion and greater rainfall. The advance of the great boulder diminishes progressively as the ice terminus is approached.

Variations in distance between the great boulder and the glacial erratic marked "1922," due to side-slip from ice-pedestals, are as follows: 350 ft. (1922), 440 ft. (1926), 429 ft. (1930), 410 ft. (1934), 411 ft. (1937).

In 1937 plates 6 and 8 of the 1922 line were still on the ice, just above the upper margin of the terminal dirt-zone of the tongue, and about 1200 ft. below the surveyed line A-B of 1922.

♣

Prior Peak (10,750 ft.) and *Unnamed* (10,150 ft.). July 8th, 1937. First ascents of these were made in a continuous route from camp below the tongue of Freshfield glacier. E. Cromwell, E. Cromwell, Jr., Miss G. Engelhard, F. S. North, J. M. Thorington. From the Freshfield basin the crevassed draw leading to the base of Mt. Nanga Parbat was ascended, turning on the upper snow plateau to pass between Mts. Bulyea and Walker, Prior Peak then being traversed from S. to N. on broken ledges. On returning through the Bulyea-Walker saddle, the snowfield was crossed to

PEAKS ON CREST OF WINDY RANGE
W. of Mt. Trident

MT. TRIDENT (CENTER)
From the N.

Photos, K. Gardiner

S. E. to gain the unnamed peak on the watershed between Mts. Barnard and Trutch, traversing it from W. to E. "A miniature traverse of Mt. Victoria." Interesting views of frozen Waitabit Lake.

Total distance covered about 22 miles. Ascent from camp to summit of Prior Peak, 7 h.; total time 12.5 h.

J. M. T.

♣

Selkirk Range of British Columbia

Mt. Trident. The opening of the highway along the Big Bend of the Columbia River brings nearer a large number of peaks unclimbed and unnamed. It will not, however, make them readily accessible to climbing parties unless trails are cut through the region. Mt. Trident, 10,141 ft., was seen and named from Kinbasket Lake by Dr. Charles Shaw in 1910. It would seem to be as accessible as any. Miss Kate Gardiner and the writer, with the Swiss guides, Edward Feuz and Christian Häsler, climbed it in July, 1937. Motoring from Banff to Kinbasket Lake at Middle River, we were met and rowed across the lake by Peter Bergenham of Beavermouth, an expert boatman and woodsman. The next day and the morning after, ten hours in all, we spent, fighting our way with packs to the head of the valley, through heavy undergrowth, massive windfalls, devil's club and, worst of all, alder-slides. Much cutting was necessary to get through at all. The distance is probably only four or five miles, but up from 2203 ft., the altitude of the lake, almost to timberline. Camp was made on the moraine on the N. E. side of a lovely glacier cirque inhabited by some forty goats.

Two peaks are visible from Kinbasket Lake and as one proceeds up the valley, a third appears on the left (E.). The middle one is the highest; the right resolves itself into a mere shoulder of Trident and the left proved to be several hundred feet lower. The ridge of Trident from the col between it and the unnamed lesser peak to the E. is a series of jagged rocks, and ascent to the summit cut off by a perpendicular slab of rock. Ascent by our party was made by crossing the col (four hours from high camp) and descending to the W. slope (two hours including route finding), where slabby rocks gave access to a high bench running around the mountain. Following this, we came to the final ridge with some good climbing to the summit (three hours); return to camp in six hours.

The view is extensive. The Columbia Icefield, thirty to forty miles away, is distinguishable best with field-glasses. Mt. Adamant, Sir Sandford, Iconoclast, and the Sorcerer could be recognized easily. The depression of the Big Bend could be traced but Mt. Chapman, unknown to our party, was not noticed probably due to a thunderstorm which struck us as we approached the summit and

passed off to the W. The lesser peak E. of Trident presents slanting, slabby rocks to the climber from the col, and a better approach might be from the ridge at the head of the valley. The most spectacular peak nearby is on the crest of the Windy Range to the S. W. It is considerably higher than Trident, offered no apparent route of ascent, and will not be easily accessible to climbers. Those who wish to climb there must be prepared to battle their way through the forests to reach any peak.

LILLIAN GEST.

ALPS

Supplemental Notes on Early American Ascents

Mont Blanc. Through the kindness of M. Paul Payot, of Chamonix, the editor has received a copy of his father's (Venance Payot) *Oscillations des Quatre Grands Glaciers de la Vallée de Chamonix* (Geneva, 1879), containing a list of ascents made up to the autumn of that year. It is possible to give the following corrections and additions to the list already published in *A. A. J.* i, 362 ff., the numbers corresponding:

7. V. P. confirms the fact that Thomas Houldsworth, who accompanied Henry Fairbanks on August 5, 1856, was an Englishman.

28. Sebright, John. V. P. gives date of ascent as September 24, 1856.

51. Edward, J. V. P. states that he was a *capitaine* and made the ascent with Chase.

54. M. H. V. P. gives the name as Ornot, M.-H., who appears to have accompanied A. Adams Reilly on this date.

63. Rane, John-T. V. P. gives the name as Kane, John-J.

64. Graham-Gardiner-S. V. P. gives the name as Gardiner, J.-Graham.

65. Davenport, W. V. P. gives the name as Davenport, H.-W.

66a. V. P. lists John Hadley as an American.

70. Reuce, général. V. P. gives the name as Reme, le général.

72. Freuk-Learned. V. P. gives the name as Learned, Frank.

73. Clarence, Rev. Burel. V. P. gives the name as Buel, Clarence, le Rev.

In addition, Venance Payot includes the following American ascents:

September 21, 1875—Hargous, Robert L. and Ely, Joseph A.
July 15, 1876—Lawrence, Robert.
August 11, 1876—Teschemacher, A.-Moxen.
August 9, 1877—Kendoll, Franch.-J. and Hosward, Charles-P.
July 17, 1878—Carteret, James-J. de.
July 18, 1878—Richards.
August 2, 1878—Schevenson, Job.-E.
August 31, 1878—Nickerson, Edward.
September 2, 1878—Brown, Georges-S. and Fergusson, J.-Henry.

From the *livres des guides* of the Favret family, now in the collection of Mons. Payot, the following American notes are taken:

I take great pleasure in recommending François Favret to all lady travellers as a most modest, obliging and efficient guide, having conducted me from Chamonix across the Tête Noire to Martigny.

September 9, '50 Josephine D. Eppes
Virginia, U. S. A.

Favret, Louis Venance, has been my guide to the 'Jardin' and I take much pleasure in recommending him as a good guide & a good man.
Chamouni, Aug. 29th, 1851 H. O. Anderson
of New Orleans, U. S. A.

Edward Favret acted as my guide during our present visit to Chamonix and gave entire satisfaction by his care, attention and intelligence.
August 18, 1858 H. J. Raymond & wife, of New York

♠

Mr. Sydney Spencer has kindly transcribed the following American entries from *Führerbücher* in the A. C. library:

1860. Aug. 29. Chamounix. Stephen zum Taugwald was my guide in the ascent of Monte Rosa, in the pass of the Weiss Thor, the tour of Monte Rosa and Mt. Blanc to Chamounix and it gives me great pleasure to recommend him as a most capable and skilful guide and as a faithful and obliging man.

E. J. Dunning of New York.

1860. Aug. 29. Zermatt. Johann zum Taugwald assisted my general guide (Zacharie Cachat) in conducting me on the 29th August 1860 to the summit of Monte Rosa. I found him athletic, active, efficient and patient. His readiness and strength of hand in rendering assistance deserve special praise. I have no hesitation in recommending him as a guide.

Dr. Luther Parks, Jr., of Boston.

1865. Sept. 3. Saas. Pierre Zurbriggen has guided us over the Weiss Thor from the Riffel Hotel. He seems tough, genial & very attentive. We heartily recommend him.

W. C. Gannett
C. A. Humphreys of Boston.

1866. 9th Oct. Val Tournanche. Franz Weisshorn Biner has acted as first guide with my family of several ladies & today from Zermatt over the St. Théodule and has given us entire satisfaction.

Henry Probasco of Cincinnati, Ohio.

1866. Aug. 24. Peter Knoble [Knubel], the bearer, accompanied us to the summit of Monte Rosa today. He acted in the capacity of guide and showed himself fitted for the position. We cheerfully recommend him to anyone who may desire to employ him.

Ford Morris
W. W. Hall of New York.

1867. Sept. 1. Willigen, Schatterhalb, Oberhäsli. Johann von Bergen has acted as guide for me in the ascent of the Wetterhorn from this place. I take much pleasure in recommending him as a thoroughly capable and obliging man.

Marius Willett of New York.

1867. Sept. 11th. Laurent Lanier was one of our guides from Courmayeur to Chamounix by the *Col du Géant*, Sept. 7, and in the ascent of *Mount Blanc*, Sept. 11 1867. We recommend him highly as an excellent guide.

F. Trevithick of England.
D. W. Bishop of New York.
T. Alston Bishop of New York.

1869. Sept. 28th. Peter Knubel took me up the Breithorn, a new way Sept. 20, ascended but once before & and then by himself. The way was very steep going up directly opposite the Riffel. He is a capital guide slow but sure, Festina lente. I should recommend this man to *any & every one*.

Wm. W. Stuart of New York.

Mountaineering Dogs. In addition to those already cited, (*A. A. J.* ii, 553; iii, 113), Mlle. C. E. Engel would add *Lutine,* the pet of Major Rogers (*Le Major Roger et son barometre, A. A. J.* ii, 542), who climbed the Chenalette in 1833 and, a few weeks later, crossed the Monte Moro—a noteworthy achievement considering the date.

♣

An Early American Traveller in the Alps was Peter Irving, brother of Washington Irving, whose Journal of a crossing of the Alps and trip through Switzerland, June 20th-July 6th, 1807, is in the Yale University Library, and will shortly appear in the *Bulletin* of the New York Public Library.

♣

Eiger. As for the past few years, many attempts were made to climb the N. face of the Eiger, and as has been usual, the name, Eigerwand, as the head of a dispatch has meant a tale of disaster, injury and death. A number of parties appeared on the scene to try their luck, national jealousies apparently playing an important part. Two Italian "guides" climbed a part of the wall, and traversed as far as the Mitteleggi Hut from which they had to be rescued. Two German boys attempted to climb the section of the wall up which lies the route successfully completed by Herr Lauper a few years ago. After several days' climbing they managed to reach the Mitteleggi ridge, from which they were finally rescued after one had died of exposure. They had foolishly left a rucksack containing their food and tentsack at the foot of the climb. Another German party in attempting the climb found and recovered the body of one of the men lost last year. It is encouraging to note that even the German press is turning against these senseless exhibitions of heroics. We are led to wonder, however, whether the cost of last year's rescue parties, RM. 5500 or slightly under $2000, had anything to do with this reversal of attitude.

In pleasing contrast to the sorry tale of the attempts on the N. face is the account of the successful climb at the first attempt of the S. E. face of the Eiger on August 11th-12th by O. Eidenschink and E. Moeller, when they negotiated this forbidding face by straightforward climbing, and were forced to take two days for the climb only by the lateness of their start.

♣

Caucasus

Ski Traverse. Three members of the Austrian Ski Club made a notable traverse on skis of the central chain of the Caucasus this past summer. Hugo and Fred Rössner, and Anton Hromatka started from the Terek Valley on June 1st, and skied via the Khrumkol and Bezingi Glaciers to Misses Kosh in the Bezingi

Valley. Thence via the Zanner Pass, Kitlod, Tuiber, and Tot Glaciers, the Bashil Pass, Leksur Glacier, Jantugan Icefall and Pass they proceeded to Adyl Su in the Baksan Valley where they arrived on June 11th, a total trip of some 50 miles with ascents totaling 23,000 ft. Although only one very short section had ever been skied before, it was necessary to carry the skis only three times over very short rocky ridges. When it is realized that the trip was carried out in the face of bad weather the performance becomes even more creditable.

♣

English Expedition. Four English climbers, R. L. Beaumont, R. A. Hodgkin, M. S. Taylor, and J. R. Jenkins, made a number of notable ascents in the week of July 20th-27th. They negotiated the first ascent of Jailik-Bashi, 14,868 ft., by the S. face, the first traverse of the Adyr-su-bashi, 14,673 ft., by the N. E. ridge from Urubashi Pass to the Adyr Valley, and two unclimbed peaks on the ridge between Kichkidar and Junonkara, which they named Trident and Kupolatau. They then crossed the Betsho Pass and traversed Gulba, after which they climbed Ushba by a new route up the S. ridge. In the upper part this is very similar to that tried a few years ago by Coolidge and Lambert.[1] They also did a very fine climb on the N. face of Tetnuld, 15,918 ft., descending by the E. face.

♣

Himalayas

The American Alpine Club has received permission to send a small expedition to the Karakoram. A party of six climbers will leave New York early in April, follow the route of the Duke of the Abruzzi from Srinagar to the Baltoro Glacier, and camp at the foot of K2. The object will be to complete the latter's reconnaissance of the ridges of the mountain, and, weather permitting, to make an attack on the summit.

♣

Nanga Parbat. Probably the most talked about mountaineering expedition this past summer was the German attempt on Nanga Parbat, which ended so disastrously. The news last June, informing us that practically the entire party had been wiped out by an avalanche was unbelievable. At Camp IV, in the early morning of June 15th, shortly after midnight seven of the nine German members, and nine Sherpa porters were overwhelmed by an immense avalanche which descended from the hanging glacier on Rakhiot Peak. It swept three-quarters of a mile across the level terrasse, on which the camp was situated, and buried the tents under many feet of

[1] *A. A. J.* I, p. 277. For comparison see *A. J., 39,* p. 276.

ice and hard-packed snow. The campsite was not the same as previously used which had always been looked upon as one of the safest on the mountain. Three members of the Himalayan Foundation were sent out immediately from Germany by air, under the leadership of Paul Bauer. They recovered the bodies of five of the Europeans, which they buried nearby. Diaries and scientific data were also recovered.

♣

Ċhomolhari. In May, 1937, Mr. F. Spencer Chapman with the porter, Passang, successfully accomplished the ascent of this beautiful mountain in the Butan-Tibet border. Unfortunately his companion, C. E. Crawford, could not continue on to the summit owing to the necessity of returning to Calcutta on time. Mr. Chapman through friendships made on a mission to Lhasa was able to obtain permission for his climb. Although no difficulties were experienced on the ascent, the descent was fraught with adventure. Near the summit, Passang slipped, carrying away Chapman who was taking a photograph. After a fall of about 500 ft., Chapman succeeded in getting his iceaxe in and stopping the fall a few feet from the edge of a precipice. Further down the two climbers were forced by a storm to reascend several hundred feet and set up a camp they had just taken down. Each night they had to wring out their wet sleeping bags before going to bed, and as their matches had been wet and were useless they had to live on snow mixed with barley meal. Another time, owing to a mix-up, Passang held the rope too taut and caused Chapman to fall into the middle of a crevasse which he was jumping, from which it took him some three hours to extricate himself. Mr. Chapman is to be congratulated on his climb and complimented on his safe return, with a sense of humor still intact.

♣

Siniolchu. This outstandingly beautiful mountain was ascended again this past summer. A group of three German climbers, Ludwig Schmaderer, Herbert Paidar, and Ernst Grob, made a trip through the Sikkim Himalaya in September, 1937, during which their climbing efforts were constantly frustrated by bad weather or worse snow conditions. They attempted the Twins and Nepal Peak twice, each time being turned back by the weather or dangerous snow conditions. Finally on September 25th, 1937, they succeeded in making with the porter, Pency, the second ascent of Siniolchu.

♣

1938 Expeditions. A seventh expedition to Everest will leave early in the spring of 1938 under the leadership of H. W. Tilman. A small Austrian expedition under the leadership of Rudolf

Schwarzgruber is understood to be projected also for this spring, as well as a Polish expedition, while the American expedition has been mentioned above.

♠

ANDES

A Polish Expedition composed of four climbers, Wojsznis, Szcepansky, Osieckj, and Parysky, made a number of climbs along the Chilean-Argentine frontier in the Province of Catamarca, among them, Ojo del Salado (6870 m.), Nevado Picis (6780 m.), Nevado Tres Cruces (6620 m.), and Cerro Nacimiento (6490 m.).

♠

Patagonian Andes. Two climbers, Stefan Zuck and Hans Teufel, during the summer of 1937, January through March, made a number of new ascents in the southern Andes of Chile. The E. peak of the Payne Group, Monte Admirante Nieto, 2460 m., and three other peaks of over 1500 m. were ascended in this district. In the Darwin Group, they climbed Monte Louise, Monte Serka, and Monte Miguel, as well as exploring the Yendegaia Glacier and a hitherto unknown valley and mountain massif which they named the Alessandri Valley and Monte Alemannia. Monte General Ponce as well as Monte Italia on the Beagle Canal were also climbed.

The well-known Andean explorer, F. Reichert, was busy in the region of Monte Maca while at the same time A. de Agostini was again in the vicinity of the Patagonian icecap, exploring the section W. of San Martin, Viedma, and Agentino Lakes from December, 1936, through March, 1937.

♠

Chilean Andes. The twelfth ascent of Aconcagua was made on January 31st, 1937, by Juan Schuckert. The second ascent of El Tronador, 3470 m., was made in January, 1937, by Otto Meiling. In September, 1937, H. Hess and R. Roth succeeded in making the first ascent of Puntiagudo, but on the descent, Roth slipped, dragging Hess from his footholds. Roth was killed but Hess managed to return safely.

♠

Spitsbergen. The two German climbers, R. Eidenschink and K. Schmitt, spent the months of July and August in Spitsbergen and are understood to have made some eleven new climbs.

K. A. H.

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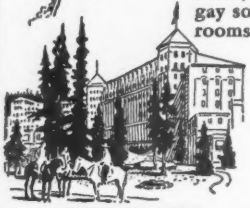

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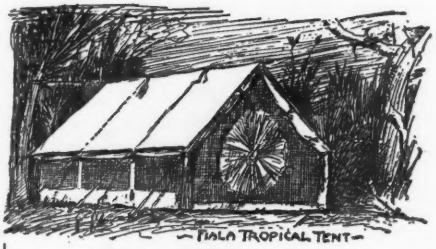

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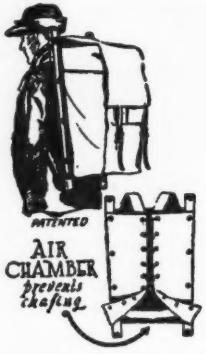

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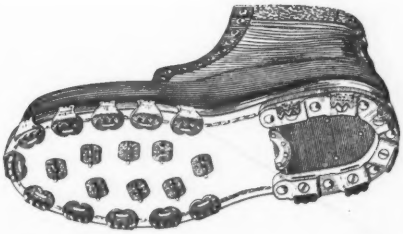

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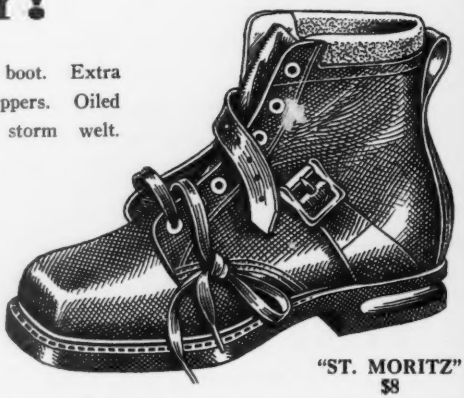

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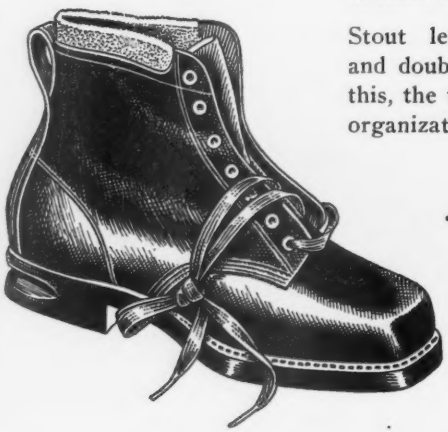

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